AUTHOR INDEX

The letters SA preceding the page number designate authors of special signed articles; the letter N indicates authors mentioned in the Notes section; LE refers to authors of letters to the Editor; and B designates authors of recent books listed in the Notes section.

Names beginning with Mc are indexed before those beginning with Ma.

Abraham, S., 92
Abrahams, C., 170
Ach, K.-L., 122
Achaya, K. T., 60
Adam, D. J. D., 119
Adams, M., 231
Aguirre, A., 272
Ahn, P., 213
Ahrens, E. H., Jr., 3, 178
Akeson, W. R., 186
Akim, B., N95
Albers, H. J., 108
Albrink, M., 292
Alekseev, N. A., N223
Alfin-Slater, R. B., 60, 144, 240
Alfrey, C. P., Jr., 197
Alldis, D., 178
Allégen, L.-G., 263
Allison, J. B., 202
Allison, M. J., 157, LE286
Allman, D. W., 151
Altland, P. D., 149
Altschul, A. M., B224
Alvares, A. P., 257
Anand, B. K., 174
Anast, C. S., 133
Andelman, M. B., 225
Andersen, S. M., 346
Anderson, E. I., 125
Anderson, E. L., 161
Anderson, J. T., 3
Andersson, B., 104, 311
Andrews, J. S., 218
Andrus, S. B., 302
Anggård, E., 141
Anna, K., 40
Antar, M. A., 292
Arens, J. F., 248
Arkey, R. A., 43
Arroyave, G., 65
Asatoor, A. M., 326
Aschkenasy, A., 242
Asfour, R. Y., 97
Ashley, L. M., 331
Atkin, L., 78
Augustinsson, K.-B., 166
Averill, H. M., 307
Awapara, J., 284
Axelrod, A. E., 250
Ayyoub, N. I., 218
Azar, G. J., N95
Azzam, S. A., 97

Bader, R. A., 45
Bacharach, A. L., 321
Baens, G. S., 10
Baertl, J. M., 164
Bain, J. A., 207
Baker, G. E., 345
Baker, N. J., 307
Baleh, C. C., 311
Balfour, W. E., 33
Ball, M. R., B96
Baluda, M., N256
Barker, R. J., 89
Barnes, R. H., 346
Baron, J. M., 257
Barr, M., 166
Barrnett, R. J., 252
Bartsch, G. E., 131
Bass, D. E., 45
Bassett, D. R., 323
Bates, L. S., 336
Bauer, D. C., 19
Baughan, M. A., 60
Baumgardt, B. R., 311
Bazett, H. C., 45
Bearn, A. G., 295
Beaton, G. H., B96
Beaton, J. R., 238
Beaumont, J.-L., 329
Beck, J. E., 134
Beck, P., 102
Beck, S., 53
Beerthius, R. K., 141
Béhar, M., 65
Behnke, A. R., 149
Behrman, E. G., 279
Bell, E., 106
Benjamin, W., 153
Bennett, M. K., 193
Benson, S. A., 102
Berg, C. P., 202
Bergan, J. G., 332
Bergen, S. S., Jr., 71
Berger, L., 171
Bergström, S., 141
Berman, L., 53
Bernick, S., 144
Berry, D., 40
Best, C. H., 345
Bethell, F. H., 33
Beutler, E., N256
Bezman, A., 232
Bibby, B. G., 307
Biely, J., N63
Bieri, J. G., 218, 313
Bierman, E. L., 37
Billewicz, W. Z., 199
Binet, J. L., 53
Bing, R. J., 14
Birnbaum, S. M., 231
Bishop, R. C., 33
Björklund, B., 166
Black, A., N30
Blackwell, B., 326
Blahd, W. H., 171
Blake, R. M., 297
Blank, M. L., 343
Blankenhorn, D. H., 178
Blaxter, K. L., 157
Bleier, R. E., 3
Blewett, M., 345
Bligh, J., 104
Blix, G., B192, B320
Bloch, K., 187
Block, J., 207
Block, W. D., 295
Bloom, W. L., N95
Bloomfield, D. K., 187
Blomstrand, R., 240
Boass, A., 33
Bohstedt, G., 346
Böök, J. A., 53
Booth, C. C., 33, 178
Boquet, P. L., 284
Borchers, R., 346
Bordier, P., B256
Borgström, B., 178
Borré, A. J., 238
Borsook, H., 16, N30
Bothwell, T. H., 170
Bowden, D. H., 284
Bowes, A. D., 84
Bowyer, D. E., 302
Boycott, A. E., 149
Boyden, C. M., B96
Brachet, I., 111
Bradlow, B. A., 170
Bragdon, J. H., 181
Braithwaite, D. M., 292
Bratzler, J. W., N30
Braverman, J. B. S., 18
Brazie, J. V., 327
Brecher, G., 16, 53, 252
Bremer, J., N351
Bressani, R., 272
Bressler, R., 14
Briggs, F. N., 58
Briggs, G. M., LE95, 151
Brin, M., 234
Brinkley, P. C., 225
Brobeck, J. R., 104, 174
Brock, J. F., 321
Brody, S., 166
Brooks, F. P., 134
Brot, N., 115
Brown, E. B., 72
Brown, E. B., Jr., 189
Brown, E. F., 218
Brown, J. H., 202
Brown, P. K., 248
Browning, R. H., 161
Brozek, J., 234
Bruno, D., 183, 231
Bücher, T., 279
Buchwald, H., 178
Buckley, R., 18
Budz, D. M., 181
Bunting, K. W., 267

Buntz-Olsen, O. E., 82
Bunyan, J., 55, 82
Burch, H. B., 221
Burgess, E. A., 101
Burnet, F. M., 80
Burr, G. O., 141
Burr, M. M., 141
Burton, R. M., 58
Buschke, W. W., 197
Butts, J. S., 171
Byers, S. O., 178, 329

Caldwell, F. T., 304
Calloway, D. H., 68
Calvert, C. C., 90
Cama, H. R., 332, 341
Camerini-Davalos, R. A., 323
Cameron, J. R., 6
Campbell, I. C., 345
Campbell, J. A., 272
Campling, R. C., 311
Cancio, M., 71
Canham, P. A. S., 170
Cantoni, G. L., 125
Carlson, L. A., 238
Carmody, S. E., 16
Carnot, P., 16
Carpenter, M. S., 68
Cartwright, G. E., 164
Carstairs, K., 53
Caspersson, T., 111
Caster, W. O., 213, 234
Castle, J. B., 181
Castle, W. B., 33
Caulfield, J. B., 181
Cawley, J. D., 341
Century, B., 24
Cépède, M., B96
Chaikoff, I. L., 92, 115, 187, 240, 246, N255, 292, 346
Challoner, D., 14
Chamberlain, J. C., N223
Chance, B., 119
Chance, R. E., 21
Chang, T. L., 122
Chapman, D. G., 272
Charlton, R. W., 170
Chernick, S. S., 171, 346
Childs, B., N191
Choitz, H. C., 202
Chow, B. F., 84
Christensen, F., 304
Chvapil, M., 84
Clapper, W. E., 326
Clark, C., 193
Clark, W. C., 43
Clark-Turri, L., 47
Coggeshall, R. E., 313
Cohen, A. M., 244
Cohen, C. F., 89
Cohen, H. P., 202
Cohn, C., 292
Colcher, H., 10
Cole, H. H., 157
Collins, F. D., 213
Colvin, H. W., 157
Combs, A. M., 221
Comline, S., 33
Commons, R. R., 178
Cone, T. E., 97
Conel, J. L., 65
Conn, J. W., 323
Connor, W. E., 3
Conway, E. S., 231
Coon, M. J., 21
Cooper, B. A., 33
Coots, R. H., 3, 12
Cordano, A., 164
Corman, L., 246
Cornatzer, W. E., 345
Cornblath, M., 10
Cornwell, G. G., 134
Copeland, D. H., 90
Cotzias, G. C., 236
Counts, M., 202
Coursin, D. B., SA65
Cowley, J. J., 211
Cox, G. E., 302
Crafts, R. C., 16
Craig, C., 340
Cravioto, J., 65
Creasey, W. A., 207
Cronkite, E. P., 33
Crome, L., 65
Cruz-Coke, R., 293
Cupps, P. T., 157
Czerniak, P., 74

Dabbous, I., 97
Dahl, L. K., 340
Dahlqvist, A., 101
Dailey, R. E., 240
Dakroury, A. M., 186
Dam, H., 304, 309
Damant, G. C. C., 149
Dang, H. C., 257
Dangerfield, W. G., 37
Daniel, M. R., 55, 82
Daniels, A. L., 236
Danielsson, H., 141
Danowski, T. S., 199
Darby, W. J., 1, 97
Das, S. K., 307
Datta, S. P., 295
Daughaday, W. H., 43
Davies, J. N. P., 111
Davidson, E., 112
Dawson, R. M. C., B192
Day, A. J., 240
Dean, R. F. A., 65, 111, 137
Debons, A. F., 252
Decker, A. B., 12
de Duve, C., 106
Deflandre, C., 16
deFritsch, N. M., 349
de Fune, C., 65
de Gier, J., 24
DeLong, D. C., 21
DeLuca, H. F., 213, 216
DeMuth, W. E., Jr., 178
Desai, I. D., 90
de Seze, S., B256
Deuel, H. J., 60, 171
Deuschle, K. W., 40
Deutsch, H. F., 19
Devadas, R. P., 35
De Wind, L. T., 178
Deykin, D., 108, 115, 240
Dickens, D., 161
Dingle, J. T., 55, 82
Dinning, J. S., 97
Diplock, A. T., 55, 82
Dodds, M. L., 117
Dole, V. P., 37, 102, 141
Doll, R., 293
Donnell, G. N., N256
Donnelly, A. J., 53
Dougherty, R. W., 157, LE286
Doupe, J., 45
Dowling, J. F., 248
Drachman, R. H., 252
Drapanas, T., 33
Drane, H., 293
Drenick, E. J., 171
Drummond, J. C., 321
Dua, S., 174
Dubach, R., 16
Dubin, I. N., 345
Duff, G. L., 155
Dunagin, P. E., Jr., 248, 332
Dunn, J. P., 171
DuPont, J. I., 231
Durkin, J. F., 274
Dusheiko, A. A., 82

Eanes, E. D., 237
Early, J. C., 284
Eckfeldt, G. A., 186
Edelman, P. M., 252
Eder, H. A., 187
Edisbury, J. R., 341
Edwards, J. H., 293
Edwin, E. E., 55, 82
Eglinton, G., 141
Ekelund, L. -G., 238
Ekengren, K., 263
Ekberg, S., 166
Elias, L. G., 272
Eliot, J. W., 45
Elkinton, J. R., 199
Ellenberg, M., 323
Elvehjem, C. A., 186
Elves, M. W., 53
Elwyn, D., N351
Embree, N. D., 341
Emerson, G. W., 326
Endicott, K. M., 197
Engelman, K., 326
Entenmann, C., 284
Epstein, F. H., 323
Epstein, L. B., 53
Erdody, P., 341
Erickson, B. A., 3
Everson, G. J., 236

Fábry, P., 84
Fagan, V. M., 187
Fallon, H. J., 207
Farber, E., 111, 125
Farr, R. S., 299
Faura, J., 16
Favour, C. B., 242
Feigelson, E. B., 207
Fell, H. B., 55
Fiala, G., 346
Field, H., Jr., 50, 108, 240
Field, J. B., 43
Fieldsteel, A. H., 131
Figard, P. H., N351
Fillerup, D. L., 12
Fimognari, G. M., 187
Finch, C. A., SA129, 321
Finkelstein, M. S., 19
Fishbein, W. I., 225
Fitzgerald, P. H., 53
Fletcher, D. E., 313

Florence, A. L., 221
Folkers, K., B64, 90
Follis, R. H., 197
Follis, R. H., Jr., 210
Fone, D. J., 178
Forbes, E. B., N30
Forbes, G., 72
Ford, C., 146
Forsham, P. H., 102
Foy, H., 87, 197
Frantz, I. D., Jr., 187
Fratta, I., 58
Fredericks, E. J., 43
Fredrickson, D., 181
Fredrickson, D. S., 37, 238
Freedland, R. A., 279
Freedman, M., 329
Frei, E., III, 207
Freinkel, N., 43
French, J. E., 33
French, S. W., 262
Frey, C. N., 78
Fried, W., 16
Friedman, L., 221, 244
Friedman, M., 178
Fritz, I. B., 246
Fromageot, P., 284
Frost, D. V., 21, 144
Fudenberg, H. H., 19
Futterman, S., 218

Gallagher, C. H., B64
Gallagher, N. I., 16
Galli, C., 265
Ganguly, J., 218, 240
Ganzin, M., 349
Gardner, L. I., 133
Garland, P. B., 102, 246
Gasenko, L. I., N223
Gauglitz, E. J., Jr., 51
Geber, M., 65
Gebhard, R. L., 178
Geer, J. C., 155
Geever, E. F., 237
Geiser, P., 237
Gellerman, J. L., 51
Gellhorn, A., 153
Gerritsen, T., 8
Gersh, I., 149
Gershoff, S. N., 321
Gershon-Cohen, J., 6
Gesner, B. M., 53, 80
Getz, G. S., 240
Gibson, D. M., 151
Giese, A. C., B352
Gilbert, M., 14
Gillam, A. E., 341
Gillman, J., 321
Gillman, T., 170, 321
Ginsburg, V., 80
Gitlin, D., 327
Glass, G. B. J., 33
Glassman, N. H., 24
Glauert, A. M., 55, 82
Glende, E. A., Jr., 345
Glenn, J. H., Jr., 68
Glick, S. M., 102
Glimp, H. A., 257
Glomset, J. A., 108
Goldblatt, H., 349
Goldblatt, M. W., 141
Goldblith, S. A., B224
Goldbloom, R. B., 297
Goldfinger, S., 171
Goldsmith, G. A., SA1
Goldsmith, T. H., 89
Goldstein, L., 279
Goldstein, N. P., 301
Goldwasser, E., 16
Gonzaga, A., 131
Good, R. A., 146
Goodale, W. T., 14
Goodhart, R. S., B32
Goodman, DeW. S., 108, 115, 240, 343
Goose, D. H., 168
Gopalan, C., 331
Gordis, E., 37
Gordon, J. E., 65, 97
Gordon, R. S., Jr., 74, 238
Gordon, S., 108
Gorlin, R., 323
Gottschalk, A., 80
Gould, R. C., 187
Gould-Hurst, P. R. S., 240
Gowans, J. L., 53, 80
Gowdey, C. W., 149
Goyer, R. A., 284
Graber, C. D., 334
Grady, H. T., N287
Graham, G. C., 164
Graham, G. G., 65
Grande, F., 3
Gray, E. LeB., 218
Greaves, J. P., SA193
Green, D. E., 216
Green, J., 55, 82
Greenberg, D. M., 279, N351
Greengard, P., 58
Greenstein, J. P., 231
Grenby, T. H., 275
Gresham, G. A., 112, 302
Greslin, J. G., 40
Griesel, R. D., 211
Griffith, I. V., 334
Griffiths, D., 168
Grodsky, G. M., 102
Grond, L., B96
Gross, J. B., 301
Gruger, E. H., Jr., 51
Guggenheim, K., 272
Guha, A., 248
Gumpel, R. C., 43
Gumshata, A., N286
Gunning, B., 178
Gupta, J. D., 186
Gürtler, J., 240
Gutman, A. B., 171
György, P., 65, 82, 349

Hackel, D. B., 14, 340
Hafner, F. H., 346
Haines, H., 340
Haines, P. C., 346
Haldane, J. B., 149
Hales, C. N., 102
Hall, V. E., B352
Halver, J. E., 21
Hamilton, T. S., N30
Hamlin, J. T., 37
Handler, P., 202, 207, 345
Handschumacher, R. E., 207
Hanissian, A., 97
Hankin, L., 207
Hansen, A. E., 60, 119, 141
Hanson, P. G., 238
Harfouche, J. K., 97
Harlow, H. F., B352
Harper, A. E., 21, 125, 186, 202
Harper, R. A., 237
Harrar, J. G., B96
Harris, H., 65, 295
Harris, J. A., 65
Harris, R. J. C., 53
Harris, R. S., 307
Hartles, R. L., 168
Hartmann, A. F., 10
Hartsook, E. W., LE30
Harvey, C. C., 24
Harvey, W. R., 18
Hashim, S. A., 71
Hastings, A. B., 133
Hathorn, M., 170
Haughton, J. G., 1
Havel, R. J., 232, 238
Hayashida, T., 119
Hayes, H., 144
Hayes, W. J., Jr., 225
Hayward, J. W., 346
Haust, M. D., 155
Hawkinson, G. E., 149
Heaney, R. P., 6
Heard, C. R. C., 84, 205
Hegsted, D. M., 321
Heilbron, I. M., 341
Henderson, F., 72
Henderson, J. F., 207
Hendrickson, R. F., 257
Heimlich, E. M., 164
Herman, M. V., 323
Hernandez, H. H., 240
Hershberger, T. V., LE30
Heuser, G. F., N63
Hickman, C. D., 218
Higginson, J., N287
Highman, B., 149
Hildebrand, H. E., 231
Hill, E. G., 144
Hill, R., 246, 292
Himwich, W. A., 65
Hinkelman, B. T., 187
Hioco, D., B256
Hirsch, J., 178
Hirsch, R. L., 349
Hoag, W. G., N319
Hobby, G. L., 40
Hodge, J. V., 326
Hodges, R. E., 3, SA225, 292
Hoefer, J. A., 257
Hoffbauer, F. W., 270
Hofmann, A., 178
Hofmann, A. F., 304
Hoffman, W. S., 225
Hogeboom, G. H., 122
Hohorst, H. J., 279
Holečková, E., 84
Hollifield, G., 102
Holloway, V. P., 171
Holman, R. T., 60, 122, 144, 177
Holmes, A. W., 257
Holmes, J. H., 225
Holmgren, A., 238
Holt, L. E., 65
Holt, L. E., Jr., 260
Holyoke, E. D., 41

Hörlein, H., 166
Horning, M. G., 338
Horwitt, M. K., 24, 87, SA289
Horwitz, D., 326
Hougen, A., 41
Houghton, C. I., 248
Houtart, F., B96
Hove, E. L., 90, 221
Howard, A. N., 112, 302
Howell, J. McC., 248, 313
Howton, D. R., 60
Hrůza, Z., 84
Hsu, P. -T., 125
Hubbard, D. D., 151
Hubbard, R., 89
Hubbard, R. W., 295
Huguley, C. M., Jr., 207
Hulpieu, H. R., 43
Humphreys, S., 197
Hungerford, D. A., 53
Huntsman, M. E., 345
Hurley, L. S., LE223

Ingle, D. J., 349
Irving, J. T., 82, 274
Ishikawa, E., 279
Israëls, M. C. G., 53
Isselbacher, J. K., 181, 349
Ito, K., 197, 242
Ito, T., 119, 216
Iwasaki, T., 41

Jackson, D., 246
Jackson, J. M., LE31
Jackson, R. D., 41
Jackson, R. L., 97
Jacobs, M. H., 24
Jacobson, L. O., 16
Jarrah, A., 97
Jaudon, J. C., 10
Johansen, P. V., 317
Johnson, B. C., 345
Johnson, O. C., 12, SA353
Johnson, R. E., 238
Johnson, R. M., 216
Johnson, R. N., 119
Johnston, P. V., 12
Jolliffe, N., 3
Jolling, B., 263
Jones, J. D., 138
Jones, M. F., 345
Jonxis, J. P. H., B96
Jordahl, C., 40
Joseph, D., 292
Joslyn, M. A., B224
Jowsey, J., 6
Jungawala, F. B., 332, 341
Jurtschuck, P., Jr., 216

Kahlenberg, O. J., N30
Kaley, J. S., 166
Kalter, H., 58, 82
Kamin, H., 202
Kampa, E. M., 89
Kannel, W. B., 240
Kaplan, N. O., 58
Karam, J. H., 102
Karmen, A., 207, 240, 343
Kato, A., 279
Kaufman, E. H., 43
Kaufman, N., 202
Kay, R. E., 284
Kearney, E. B., 18
Kelly, H., 97
Kelsy, R. E., 240
Kempner, F., 221
Kenamore, B., 134
Kendall, F. E., 10, 349
Kennedy, C., 10
Kennedy, G. C., 84, 174
Keys, A., 3, 234
Khosla, T., 199
Killenberg, P. G., 134
Kim, D. N., 112
Kinney, T. D., 202
Kipnis, D. M., 102
Kirsten, E., 279
Kirsten, R., 279
Klavins, J. V., 202, 317
Klein, P. D., 108
Klein, R. S., B288
Klenberg, D., 141
Klenk, E., 122
Kligman, A. M., 3
Kline, O. L., 244
Klinenberg, J. R., 171
Knight, P. L., 334
Knowles, C. B., 205
Knox, W. E., 279
Kögl, F., 24
Kondi, A., 87, 197
König, K. G., 275
Korchak, H. M., 246
Kornberg, A., 197
Kornegay, E. T., 257
Korner, A., 111
Krause, R. F., 218
Krebs, H. A., 65
Krell, K., 71
Krider, J. L., 345
Krinsky, N. I., 218
Krishnamurthy, S., 218, 240
Krishnaswamy, M. A., 282
Kritchevsky, G., 265
Kumate, J., 327
Kummerow, F. A., 12, 24
Kunitake, G., 240
Kunkel, H. G., 19, 37
Kuo, P. T., 323
Kwong, E., 346

Lagerborg, J. A., 326
Lahey, M. E., 164
Lakshmanan, M. R., 332, 341
Lambert, G. E., 144
Lambert, G. F., 21
Landrau, M. A., 58
Lane, M., 197
Langdon, R. G., 187
Lange, R. D., 16
Lanham, C., B256
Larson, B., 104
Larson, R. H., 281
Larsson, B., 311
Larsson, S., 311
Lashley, N95
Laughland, D. H., 218
Laurell, C. -B., 314
Law, L. W., 146
Law, M. D., 50, 115
Lawe, R., 117
Lawry, E., 231
Lawry, E. Y., 183
Lazor, M. Z., 43
Leary, T., 155
Leck, I. M., 221
Lederberg, J., 80
Lee, C. J., 84
Lee, K. T., 112
Lees, R. S., 37
Lehman, J., 78
Lehman, L. W., 51
Lehrer, W. P., Jr., 18
Leiberman, J., 237
Leone, C., 237
Lepkovsky, S., N159, 346
Lepkovsky, S. R., 174
Lepow, M. L., 131
Leurquin, P., 60
Leverton, R. M., 321
Levey, R. H., 146
Levi, A. J., 326
Levin, B., 101
Levitsky, K., 304
Levy, J., 262
Lewis, H. E., 45
Lewis, J. P., 16
Lewis, L., 178
Lichwitz, A., B256
Liebelt, R. A., 252
Lieber, C. S., 338
Lijinsky, W., 268
Linazasoro, J. M., 246
Lindahl-Kiessling, K., 53
Lindsay, S., N255
Lipicky, R. J., 43
Lis, E. W., 108
Lonergan, W., 134
Long, J. F., 134
Longcope, C., 240
Longenecker, H. E., 240
Lopusniak, M. S., 134
Lorch, E., 92
Lossow, W. J., 115
Lovenberg, W., 326
Lowenstein, J. M., 65, 246
Lowrey, R. S., 205
Lowry, O. H., 221
Luckey, T. D., N319
Lucy, J. A., 55, 82
Lundh, G., 178
Luow, L. J., 353
Lycette, R. R., 53
Lyman, R. L., 24, 108, 346
Lynen, F., 153

McBurney, J. J., N319
McCallum, F. M., 171
McCarthy, D. D., 171
McConnell, R. B., 293
McDaniel, E. G., 207
McFie, J., LE95
McGill, H. C., 155
McGovern, G. S., B96
McGregor, D. D., 53
McGuckin, W. F., 301
McHenry, E. W., B96
McIntosh, J. F., 133
McKay, D. G., 309
McLaren, D. S., 97
McLaughlan, J. M., 272
McMurrey, J. D., B96
McNally, A., 302
McQueen, J., 302
Mabbitt, L. A., 326
MacArthur, M. J., 78

Macdonald, I., 183, 244, 292
MacDonald, R. A., 170, 189, 262, 270
MacDougall, L., 197
Macintosh, D. L., 18
Maddy, K. H., N30
Madhavan, T. V., 331
Maggioni, G., 65
Mahadevan, S., 218
Mahalanabis, D., 101
Mahy, D. J., 53
Majaj, A., 97
Maling, H. M., 338
Malmros, H., 3, 144
Manchanda, S. K., 174
Mangold, H. K., 144
Mann, G. V., 302
March, B. E., N63
Markovs, M. E., 295
Marks, V., 43
Marley, E., 326
Marriott, P. R., 155
Marshall, W. H., 53
Marthaler, T. M., 275
Martin, R. A., 108
Martin, W. J., 168
Marshall, M. W., 231
Marshall, N. B., 252
Masoro, E. J., 246
Massey, V., 18
Mathe, G., 53
Mathies, M., 19
Matterson, L. D., 82
Mattil, K. F., B96
Mattson, F. H., 3, 12
Mayer, J., SA161, 174, 252, 311
Mbaya, V., 87, 197
Mead, J. F., 12, 60, 122, 141
Meadows, E. H., Jr., 248, 332
Medd, W. E., 43
Meghal, S. K., 334
Meier, H., N319
Meineke, H. A., 16
Meister, A., 346
Mendel, L. B., 346
Mendel, V. E., 104
Mendes, C. B., 65
Menéndez-Corrado, R., 71
Meng, H. C., 166
Mertz, E. T., 21, 336
Metcalf, D., 146
Metcoff, J., 242
Meyer, B., 18
Meyer, L. M., 33
Michaels, L., 41
Mickelsen, O., B32, 149, 234, 307, 340
Micklem, H. S., 146
Milburn, T. R., 137
Miller, E. L., 221
Miller, E. R., 257
Miller, J. P., 144
Miller, J. F. A. P., 146
Miller, N. E., 277
Mills, C. F. B32
Millward, E., 168
Milne, M. D., 326
Mirand, E. A., 16
Miravet, L., B256
Mitchell, H. H., 205, 321, 346
Mohrhauer, H., 60, 122
Mollin, D. L., 33, 178
Monroe, R., 89
Montgomery, M. J., 311
Montjar, M., 250
Monsen, E. R., 24, 108
Moore, C. V., 16
Moore, F. D., B96
Moore, H. W., 90
Moore, P. R., 18
Moore, S., 295
Moore, T., 89
Morales, C., 327
More, R. H., 155
Morgan, A. F., 1
Morgan, E. H., 314
Morgan, W. T. J., 80
Morgane, P. J., 277
Morin, R. J., 144
Mortimore, G. E., 43
Morton, J. I., 19
Morton, R. A., 55, 341
Mosbach, E. H., 304
Moscona, A., 80
Movat, H. Z., 155
Mühlemann, H. R., 275
Mukherjee, S., 60, 240
Mulder, I., 24
Mullenax, C. H., 157, LE286
Muñoz, J. C., 65
Munro, A. J., 153
Munson, P. L., 58
Murphy, D. P., 84
Murray, T. K., 341
Myant, N. B., 187
Mysinger, M., 18

Najjar, S., 97
Nakamura, K., 146
Nanavaty, K., N286
Narayana Rao, M., 75
Nasset, E. S., 21
Nath, M. C., 334
Natori, Y., 125
Navarete, J. L. P., 65
Nelken, D., 248
Nelson, M. M., N223
Nelson, N. A., 33
Nelson, O. E., 336
Nelson, R. W., 51
Nesheim, M. C., 90
Nestel, P. J., 232
Neufeldt, I., 153
Neumann, A. L., 345
Neusholme, E. A., 102
Newell, A. C., 293
Nielson, G. R., 309
Niemeyer, H., 47
Nieweg, H. O., 33
Nill, F. W., N63
Ninigawa, T., 279
Nizel, A. E., 307
Nord, F. F., B352
Norman, A., 141, 257
Norris, F. A., B96
Norris, L. C., N63
Northcutt, T. J., Jr., 161
Norton, P. M., 260
Nováková, V., 211
Nowell, P. C., 53
Nugteren, D. H., 141
Numa, S., 153
Nye, E. R., 326
Nye, W. H. R., 37
Nyhan, W. L., N191
Nystrom, C., 221

O'Brien, D., 327
Ogilvie, C. M., 326
Ogryzlo, M. A., 171
Ohlson, M. A., 292
Okey, R., 24, 108
Olesen, K. H., B96
Olivecrona, T., 12
Oliver, B., 18
Oliver, T. K., 263
Olley, J., 345
Olsen, R. T., 144
Olson, J. A., 248, 332, 341
Olson, R. E., 14
Olsson, B., 166
O'Meara, R. A. Q., 41
O'Neal, R. M., 334
Ontko, J. A., 246
Ophuls, W., 155
Opie, L. H., 14
Orr, B., 193
Orten, A. U., 242
Osborne, T. B., 346
Osgood, E. E., 53
Osoba, D., 146
Osmon, K., 297
Osmond, D. G., 53
Ostrander, L. D., Jr., 323
Otey, M. C., 231
Ott, M., 197

Paddock, P., B96
Paddock, W., B96
Padilla, A. M., 221
Padykula, H. A., 33
Page, I. H., 178
Palade, G. E., 122
Palmer, R. H., 304
Parker, H. V., B96
Parker, J., 307
Parlier, R., B256
Parpart, A. K., 24
Parson, W., 102
Passmore, R., B32, 171, 238
Patek, A. J., 349
Patek, A. J., Jr., 10
Patterson, J. W., 267
Patterson, M. E., 267
Paulsson, J.-E., 166
Pavalatos, F. C., 102
Payne, J. H., 178
Peacocke, I. L., 202, 317
Pearmain, G., 53
Pearson, W. N., N286
Pechet, G. S., 189, 262
Pedreira, F., 304
Penick, G. D., 112
Pentz, E. I., 284
Peraino, C., 279
Percy, E., 218
Perez, N., 47
Perry, J. H., 252
Persson, B., 263
Peterson, M. L., 37, 71
Pfaff, W. W., 207
Phillips, G. B., 292
Phillips, L. L., 309
Philp, R. B., 149
Pickering, D., 177
Pierce, A. E., 33

Pihl, A., 187
Pike, R. L., LE159
Pilz, W., 166
Pisciotta, A. V., 72
Pitot, H. C., 279
Pitt, G. A. J., 248
Platt, B. S., 84, 205
Plotkin, G. R., 181
Plzak, L. F., 16
Polansky, M. M., 78
Pollard, C. J., 218
Pond, W. G., 205
Portman, O. W., 108, 119, 183, 231, 240
Porter, H., N63
Posner, A. S., 237
Powell, L. T., 218
Prange, I., 309
Prentice, T. C., 16
Prior, J. T., 329
Privett, O. S., 343
Pudelkiewicz, W. J., 82
Pullan, J. M., 178
Pulvertaft, R. J. V., 53

Quigley, H., 309
Quin, P. J., 196
Quinn, G. P., 58

Rabajille, E., 47
Rabin, E. R., 334
Rabinowitz, J. C., 78
Radharukmani, A., 35
Raghaven, G. V., 104
Rahm, J. J., 60
Rajalakshmi, R., N286
Rall, D. P., 281
Ramos, J., 16
Ramos-Galván, R., 65
Randall, R. V., 301
Randle, P. J., 102
Rasinski, D. C., 43
Rathbun, E. N., 149
Read, A. E., 178
Read, W. O., 284
Redgate, E. S., 58
Reinhard, E. H., 16
Reissmann, K. R., 197, 242
Reizenstein, P. G., 33
Reynafarje, C., 16
Rhodes, D. N., B192
Rice, M. L., Jr., 134
Richardson, L. R., 78
Rigas, D. A., 53
Rigdon, R. H., 313
Risdall, P. C., 33
Rivers, S. L., 207
Roath, S., 53
Robbins, F. C., 131
Roberts, K. B., 53
Robertson, W. F., 221
Robinson, C. H., B352
Robles, B., 65
Rodbell, M., 37
Rodwell, V. W., 187
Roe, F. J. C., 40
Roels, O. A., 60, 82, 218, 248, 314
Roels-Broadhurst, D. M., 60
Rogers, C. G., 272
Rogers, T. A., 45
Roheim, P. S., 108
Roitman, E., 260
Rose, C. S., 82
Rose, W. C., 21
Rosenberg, B., 304
Ross, A., 40
Rossett, N. E., 134
Rossiter, R. J., 292
Rotem, Y., 74
Roth, J., 102
Rothberg, R. M., 299
Rottenstein, H. S., 178
Rouser, G., 265
Royce, P. C., 58
Rubin, C. E., 74
Rudman, D., 207
Ryle, J. A., 321

Sabesin, S. M., 181
Sabin, A. B., 131
Sabrosky, L. K., 353
Sacks, M. S., 16
Sahier, K., 19
St. George, R. C. C., 89
Salas, M., 279
Salcedo, J., Jr., 345
Salt, H., 181
Salvesen, H. A., 133
Samuels, S., N32
Samuelsson, B., 141
Sandweiss, D. J., 134
Santos, A. S., 72
Sayers, G., 58
Schaefer, A., 65
Schalch, D. S., 102
Scheig, R., 181, 338
Schilling, R. F., 33
Schirra, W. M., Jr., 68
Schlenk, F., B160
Schlenk, H., 51
Schmaus, J. W., 197, 242
Schmid, R., 338
Schmidt-Nielsen, K., 340
Schneider, H. S., 187
Schneider, W. C., 122
Schloesser, L. L., 33
Schools, P. E., Jr., 240
Schrier, A. M., B352
Schulz, A. S., 78
Schütte, K. H., B96
Schwartz, A., 168
Schwartz, R. S., 19
Scoggins, R. B., 207
Scott, A., N128
Scott, E. M., 334
Scott, J. C., 45
Scott, J. P., 65
Scott, J. T., 171
Scott, M. L., N63, 90
Scott, R. F., 112
Scrimshaw, N. S., 65, 272
Sebigajju, E., N95
Seegmiller, J. E., 171, 207
Seftel, H. C., 170
Sekuzu, I., 216
Selim, A. S. M., 279
Sen, B. R., N351
Seshadri Sastry, P., 218
Setliff, J. A., 45
Shambaugh, G. E., Jr., N128
Shanks, W. E., 21
Shantz, E. M., 341
Shapiro, B., 92
Shapiro, J. L., 166
Shapiro, S. K., B160
Sharma, K. N., 174
Shaw, B., 33
Shaw, E. H., Jr., 284
Shaw, J. H., 168, 275
Sheffner, A. L., 186
Shen, S. C., 33
Sheppard, H., 187
Shimma, Y., 144
Ship, I. I., 307
Shipp, V. C., 14
Shiratori, T., 108, 115, 240
Shubik, P., 268
Shue, G. M., 221
Shull, K. H., 125
Shy, J. C., 134
Sidransky, H., 27, 111
Siegel, A., 14
Siekevitz, P., 122
Sigg, E. B., 58
Sinclair, H. M., 144
Singer, T. P., 18
Singh, B., 174
Siperstein, M. D., 187
Sippy, W. B., 134
Sjoerdsma, A., 326
Sjövall, J., 141
Skillman, T. G., 6
Slack, G. L., 168
Slaton, W. H., Jr., 12
Slaunwhite, W. R., 16
Smith, A. H., 242
Smith, C. A., 65
Smith, E. B., 37
Smith, J., 213, 216
Smith, J. L., 90
Smith, N. J., 164
Smith, R. B., Jr., 225
Smith, R. T., 19
Smuts, D. B., 346
Smythe, P. M., 65
Sneath, P. H. A., 80
Snell, E. E., 78, B96
Snodgrass, C. H., 231
Snyderman, S. E., 260
Sols, A., 279
Søndergaard, E., 309
Sonnenschein, R. R., B352
Sorenson, J., 6
Sourkes, T. L., 65
Spaeth, A., 207
Spear, V., 295
Spector, H., 186, 197
Spelts, J., 346
Spencer, A., 246
Spolter, P. D., 125
Staehelin, T., 111
Stahmann, M., 186
Stamler, F. W., 309
Standerfer, S. B., 207
Stansby, M. E., 51
Stare, F. J., 242, 302, 321
Stavitsky, A. B., 19
Steele, B. F., 295
Steenbock, H., 346
Stein, O., 213
Stein, W. H., 295
Stein, Y., 213
Steinbaum, E. A., 277
Steinberg, D., 207, 232, 240
Stekol, J. A., 125
Stephen, J. M. L., 65
Stetten, D., Jr., 345
Stewart, G. F., N191

Stewart, R. J. C., 84, 205
Stevenson, J. A. F., 238
Still, W. J. S., 155
Stimmler, L., 327
Stirton, A. J., B96
Stoch, M. B., 65
Stoffel, W., 122
Stohlman, F., Jr., 16, 53
Stollnitz, F., B352
Stone, D. B., 3
Stopkie, R. J., 90
Stralfors, A., 307
Strickland, K. P., 292
Strominger, J. L., 174
Strong, J. P., 177, N255, 302
Stulberg, C. S., 53
Subberwal, U., 174
Suda, M., 279
Sugano, M., 108, 240
Sumner, 257
Sundaresan, P. R., 248, 332
Sunderman, F. W., 45, 301
Sunderman, F. W., Jr., 301
Sweeley, C. C., 122
Swell, L., 50, 108, 115, 240
Swenseid, M. E., 171
Swern, D., B96
Swift, R. W., N30
Switz, D. M., 257
Szlavko, A. J., 238
Szmelcman, S., 272

Takahashi, S., 340
Tanaka, Y., 53
Tappen, N. C., 177, N255, 302
Taylor, C. B., 302
Taylor, C. E., 65
Taylor, D. D., 231
Taylor, K. B., 33
Teitelbaum, A., 244
Tepperman, H. M., 151, 304
Tepperman, J., 151, 252, 304
Thashian, R. E., 166
Thomas, L., 106, 248
Thomas, W. A., 112
Thompson, A. M., 193
Thompson, J. N., 248, 313
Thomson, A., 257
Thornes, R. D., 41
Tillman, A. D., 257
Tinsley, J. C., Jr., 16
Toepfer, E. W., 78
Tompkins, G. M., 187
Tonge, R. E., 101
Topliff, J. E., N63
Torporek, M., 33
Trainen, N., 146
Trakatellis, A. C., 65, 250
Trautman, R., 37
Treadwell, C. R., 50, 108, 115 240
Troelstra, J. A., B96
Trout, M., 60, 82, 248
Trowell, H. C., 111
Tubbs, P. K., 246
Tulpule, P. G., 119, 331
Tuna, N., 144
Tunell, R., 263
Turnbull, R. B., 178
Tuttle, S. G., 171
Tweedie, M. C. K., 168
Tymms, V., 65
Tzur, R., 92

Udenfriend, S., 65
Undriz, E., 321
Uhr, J. W., 19, 248
Ukyo, S., 33
Ullrey, D. E., 257
Ulstrom, R. A., 164
Ungar, I., 14
Unglaub, W. G., 1
Uram, J. A., 244
Usenik, E. A., 33
Uzawa, H., 166

Vagelos, P. R., 122
Vahouny, G. V., 50, 240
Vakil, U. K., 82
Vallee, B., 133
van Deenen, L. L. M., 24
van Dorp, D. A., 141, 248
Van Itallie, T. B., 71
Varco, R. L., 178
Varma, T. N. R., 341
Verdino, B., 343
Verney, E., 27, 111
Vernon, H. M., 149
Veron, O. A., 336
Vietti, T. J., 72
Villavicencio, D., 16
Villa-Trevino, S., 125
Viñuela, E., 279
Visek, W. J., SA257
Visser, H. K. A., B96
Voisin, A., B64
von Euler, U. S., 141
Vonkeman, H., 141
Voris, L., N30
Vorobieva, A. I., 236

Wacker, E., 133
Waddell, J., N95
Wade, L. J., 16
Wagner, A. F., B64, 90
Wainio, W., N30
Waisman, H. A., 8, 197
Wakabayashi, M., 338
Wakil, S. J., 14, 122
Wakonig-Vaartaja, R., 146
Wald, G., 55, 248, 332
Walker, A. R. P., SA321
Walker, B. L., 24
Wannaky, J., 58, 82
Warmanen, E. L., 144
Warren, R. J., 131
Waterlow, J. C., 65
Watkins, W. M., 80
Watson, J. D., 111
Waxler, S. H., 252
Wayler, T. J., B288
Webster, L., 82
Webster, W. W., 246
Weersing, S., 240
Weisberger, D., 168
Weiss, L., 80
Weiss, S., 125
Weissman, S. M., 207
Weissman, G., 106, 248
Wells, H., 58
Welty, J. D., 284
Werner, B., 240
West, I., 225
Westall, R. G., 65, 260
Westerman, D., 18
Westhoff, M. H., 295
Westlund, K., 41
Wharton, G. V., 297
Whipple, G. H., 242
White, J. C., 301
Whitehead, R. G., 65, 137
Whyte, M., 240, 343
Widdowson, E. M., 84
Widström, O. A., 257
Wieland, O., 153
Wiese, A. C., 18
Wiese, H. F., 60, 119, 141
Wigand, G., 3, 144
Wilgram, G. F., 270, 349
Wilkes, S., 78
Williams, G. R., 119
Williams, H. E., 43
Williams, J. N., 119
Williams, J. N., Jr., 279
Williams, M. A., 151
Williams, R. H., 240
Williams, W. L., 78
Wilson, D., 65
Wilson, J. E., 43
Wilson, J. F., 164
Wilson, T. H., SA33
Windmueller, H. G., 207
Winegarden, H. M., N30
Winitz, M., 231
Winter, G. C. B., 53
Wintrobe, M., 197
Wise, E. M., Jr., N351
Wissler, R. W., 302
Wittels, B., 14
Witting, L. A., 24
Witts, L. J., 321
Wohl, M. G., B32
Wolbach, S. B., N63
Wolf, G., 248, 332
Womack, A. M., 326
Womack, M., 231
Wong, T. C., 309
Wood, J. D., N63
Wood, S., Jr., 41
Woodruff, C. W., 1, SA97, 160
Woods, J. W., 112
Wool, I. G., 153
Woolf, L. I., 65
Wostman, B. S., 334
Wu Chang, M. L., 231
Wybregt, S. H., 10

Yagashita, K., 248
Yalow, R. S., 102
Yardley, J. H., 41
Yin, M. W., 284
Yogi, N., 302
Yoffey, J. M., 53
Yü, T. F., 171

Zachman, R. D., 341
Zak, S. B., 58
Zaki, F. G., 270
Zavon, M. R., 225
Zell, H. M., B224
Zeller, E. A., 326
Ziegler, D. D., 329
Zinn, W. J., 297
Zipkin, I., 237, 281
Ziporin, Z. Z., 234
Zuckerman, A. J., 183
Zunker, H. O., 309

SUBJECT INDEX

The letters SA preceding the page number designate a special signed article; N refers to articles or letters in the Notes section.

Absorption
bile acids, intestinal site of, 178
calcium
after ileal bypass, 178
in osteoporosis, 6
cholesterol, intestinal site of, 178
cholesterol esters, 50
fat
containing geometric isomers, 12
effect of puromycin on, 181
tests in infants and children, 297
iron
in choline deficiency, 189
in man, SA129
in polycythemic mice, N287
medium chain triglycerides, in sprue, 71
rumen gases, 157
vitamin A, in infants and children, 297
vitamin B_{12}, SA33
xylose, in man on space flights, 68
Acetoacetate
administration, effect on urate excretion, 171
Acetone
administration, effect on urate excretion, 171
Acidity
gastric contents, effect of antacid diets on, 134
Adenine
feeding, effect on lipid metabolism after orotic acid feeding, 207
Adenosine Triphosphate
in lens tissue, relation to cataracts, 267
trapping by ethionine, in protein synthesis, 125
Adipose
tissue
fatty acid composition, effect of fasting on, 151
release of fatty acids from, effect of prostaglandins on, 141
Adrenal
cholesterol in, in experimental atherosclerosis, 329
microsomes, synthesis of polyunsaturated fatty acids in, 122
regulation of serine dehydratase by, 279
Aflatoxin
cirrhosis in monkeys from, 331
Africa
Burkitt's lymphoma in, 53
Age
relation to serum magnesium levels, 133
Agriculture
toxicity of pesticide residues, SA225
Albumin
effect on liver lipid synthesis, 92
plasma levels
changes in protein malnutrition, 205
in aflatoxin poisoning, 331
in children, in Lebanon, SA97
in riboflavin deficient baboons, 87
Alcohol
effect on blood sugar levels in diabetes, 43
Alcoholism
hypoglycemia in, 43
lipoprotein types in, 37
Allergy
diseases in children, milk antibodies in, 299
Alloxan
diabetes, liver serine dehydratase activity in, 279
Altitude
effects, relation to obesity, 149
high, effect on erythropoietin production, 16
Aminoaciduria
chromatographic screening methods for, N32
γ-Aminobutyric Acid
level in brain, SA289
Amino Acids
arginine
effect on methionine toxicity, 202
requirement for chicks, effect of lysine on, 139
availability, in proteins, 186
blood distribution pattern, in maple sugar urine disease, 260
cystine
availability in fish-potato flake mixture, 282
metabolism, effect of feeding raw soybeans on, 346
deficient diets, force feeding of, effect on rats, 27
essential, for salmon, 21
free, in brain, SA289
glycine
effect on methionine toxicity, 202
hyperglycinemia, a genetic defect, N191
histidine
metabolism, in kwashiorkor, 137
(and derivatives) urinary excretion, 295
homocystine
effect on methionine toxicity, 317
excretion in mentally retarded children, 8
in mouse milk, N319
in urine, rapid screening methods for, N32
isoleucine
dietary restriction for treatment of maple sugar urine disease, 260
requirement for salmon, 21
leucine
dietary restriction for treatment of maple sugar urine disease, 260
effect on blood sugar levels in premature infants, 10
requirement for salmon, 21
limiting, in vegetable-protein foods, 272
lysine
availability, in fish-potato flake mixture, 282
dietary, effect on arginine requirement for chicks, 139
in maize varieties, 336
supplementation of plant protein diet, 75
methionine
availability, in fish-potato flake mixture, 282
blood levels, in homocystinuria, 8
metabolism, effect of feeding trypsin inhibitor on, 346
supplementation of plant protein diet, 75
toxicity, 202
effect of serine on, 317
phenylalanine, metabolism, in kwashiorkor, 137
requirements, for salmon, 21
serine
effect on methionine toxicity, 317
metabolism, 279
threonine, relation to protein synthesis, 111
tryptophan
availability, in fish-potato flake mixture, 282
deficiency, in salmon, 21
metabolism, in riboflavin deficient baboons, 87

tyrosine, metabolism in kwashiorkor, 137
valine, dietary restriction for treatment of maple sugar urine disease, 260
Anemia
in children, in Lebanon, SA97
in malnourished infants, relation to copper deficiency, 164
iron deficiency
in the U.S.A., SA1
milk antibodies in, 299
riboflavin deficiency, 197
in baboons, 87
Anoxia
production of erythropoietin in, 16
Anserine
urinary excretion, 295
Antibody
in milk, 131
synthesis
feedback control of, 19
in pyridoxine deficiency, 250
role of thymus in, 146
to milk protein, 299
to urease, SA257
Antibiotics
actinomycin D, effect on insulin stimulation of enzyme synthesis, 153
puromycin, effect on lipid transport, 181
tetracycline
effect on transmission of caries producing flora, 281
use in studying bone formation, 6
Anticoagulants
effect on cancer metastases, 41
Antienzymes, SA257
Antimetabolites
ethionine, inhibition of protein synthesis by, 125
6-mercaptopurine, effect on antibody synthesis, 19
Aorta
arteriosclerotic lesions in the ostrich, rhea, and emu, N255
atherosclerotic lesion in, electron microscopy of, 155
cholesterol in, in experimental atherosclerosis, 329
lesions
in primates, 177, 302
relation to essential fatty acid deficiency, 144
Apatite
crystal size, effect of fluoride concentration on, 237
Appetite
after hypothalamic stimulation, 277
control, in hypothalamus, 174
Arteriovenous Difference
in glucose, response of hypothalamus to, 174
Ascorbic Acid
blood levels, in Lebanese children, SA97
deficiency, cartilage changes in, 274
in rose hips, N223
intake
in the U.S.A., SA1
of American Negroes, SA161
requirement versus optimal intake, SA321
Assay
amino acids, in urine, rapid screening for, N32
caries lesions, 275
protein biological value, by enzymatic digestion method, 186
vitamin B_6 in foods, 78
vitamins, in frozen meat, 18

Atherosclerosis
experimental, in the rabbit, 329
in ostrich, rhea, and emu, N255
in primates, 177, 302
lesion in, electron microscopy of, 155
preclinical diabetes in, 323
relation to dietary carbohydrate, 183
relation to essential fatty acid deficiency, 144
Availability
amino acids, in proteins, 186
dietary arginine, effect of lysine on, 139
niacin, in foods, N286

Baboon
choline deficiency in, 270
riboflavin deficiency in, 87
spontaneous atherosclerosis in, 302
Bacteria
flora, caries producing, transmission of 281
intestinal, synthesis of thiamine by, effect of dietary fat on, 334
Bantu
siderosis in, iron distribution in, 170
Barley
vitamin B_6 in, 78
Beans
dietary, relation to Burkitt's lymphoma, 53
Benzopyrene
in broiled meats, 268
Bicarbonate
plasma levels, in fasting, effect of salt supplementation on, 45
Bile
flow, effect of estrogen on, 304
Bile Acids
absorption, site in intestine, 178
inhibition of cholesterol synthesis, 187
Bilirubin
serum levels, in aflatoxin poisoning, 331
Biological Value
anhydrovitamin A, 341
corn protein varieties, 336
epoxy vitamin A derivatives, 332
fish-potato flake mixture, 282
peanut-soybean flour, 75
protein, by enzymatic digestion method, 186
retinoic acid, 248
vegetable protein mixtures, 272
Blood
coagulation, relation to cancer metastases, 41
lipoproteins, fractionation of, 37
plasma, cholesterol esterification in, 240
pressure
effect of niacin deficiency on, N159
effect of prostaglandins on, 141
effect of tyramine in presence of MAO inhibitors on, 326
Body Composition
iron content, in man, SA129
relation to susceptibility to high and low pressure, 149
Body Temperature
measurements in sheep, 104
Bone
changes
from excess dietary homocystine, 317
in hyperglycinemia, N191
in infants, from excess vitamin A, 263
in scurvy, 274
crystal, influence of fluoride concentration on size, 237

formation, in osteoporosis, 6
marrow
changes, in protein starvation, 242
changes, in riboflavin deficient baboons, 87
hemosiderin in, for estimation of body iron stores, SA129
hypoplasia, in riboflavin deficiency, 197
role in erythropoietin destruction, 16
Book Notices
Advances in Enzymology, Volume 27. F. F. Nord, Editor. Interscience Publishers. 352.
An Evaluation of Public Health Hazards from Microbiological Contamination of Foods. National Academy of Sciences—National Research Council. 32.
Annual Review of Biochemistry, Volume 32. E. E. Snell, Acting Editor. Annual Reviews, Inc. 96.
Annual Review of Physiology, Volume 27. V. E. Hall, A. C. Giese, and R. R. Sonnenschein, Editors. Annual Reviews, Inc. 352
Applied Nutrition. T. J. Wayler and R. S. Klein. The Macmillan Company. 288.
Bailey's Industrial Oil and Fat Products, Third Edition. K. F. Mattil, A. J. Stirton, F. A. Norris, and D. Swern. Interscience Publishers. 96.
Basic Nutrition and Diet Therapy. C. H. Robinson. The Macmillian Company. 352.
Behavior of Nonhuman Primates, Volumes I and II. A. M. Schrier, H. F. Harlow, and F. Stollnitz, Editors. Academic Press, Inc. 352.
Calcium et Maladies Metaboliques de l'Os, Books I, II, and III. A. Lichwitz and R. Parlier. L'Expansion Scientifique Francaise. 256.
Coconut Bibliography. Arneta Institute of Agriculture. 96.
Genetics and the Epidemiology of Chronic Diseases. U. S. Public Health Service. 352.
Hungry Nations. W. Paddock and P. Paddock. Little, Brown. 96.
Maxwell's International Subject Bibliographies No. 26, Second Edition. H. M. Zell, Editor. Robert Maxwell & Company Ltd. 224.
Metabolism and Physiological Significance of Lipids. R. M. C. Dawson and D. N. Rhodes, Editors. John Wiley & Sons Ltd. 192.
Milestones in Nutrition, Volume 2. S. A. Goldblith and M. A. Joslyn. The Avi Publishing Company, Inc. 224.
Modern Nutrition in Health and Disease, Third Edition. M. G. Whol and R. S. Goodhart, Editors. Lea & Febiger. 32.
Newer Knowledge of Milk, Third Edition. National Dairy Council. 352.
Nutrient Requirements of Swine. National Academy of Sciences—National Research Council. 128.
Nutrition: A Comprehensive Treatise. Volume II, Vitamins, Nutrient Requirements, and Food Selection. G. H. Beaton and E. W. McHenry, Editors. Academic Press. 96.
Nutrition a World Concern. Ohio State University. 256.
Nutrition and Caries-Prevention. G. Blix, Editor. Almqvist & Wiksells. 320.
Nutrition. Proceedings of the Sixth International Congress of Nutrition. C. F. Mills and R. Passmore, General Editors, E. & S. Livingstone, Ltd. 32.
Nutrition Science and You. O. Mickelsen. Scholastic Book Services. 32.
Nutritional Factors and Enzymological Disturbances in Animals. C. H. Gallagher. J. B. Lippincott Company. 64
Occurrence, Causes, and Prevention of Overnutrition. G. Blix, Editor. Almqvist & Wiksells. 192.
Population and Food. M. Cépède, F. Houtart, and L. Grond. Sheed and Ward, Inc. 96.
Proteins: Their Chemistry and Politics. A. M. Altschul. Basic Books. 224.
Reviews in Food Science and Technology, Volume 4. Central Food Technological Research Institute. 96.
Strategy for the Conquest of Hunger. J. G. Harrar. Rockefeller Foundation. 96.
The Adaptation of the Newborn Infant to Extra-Uterine Life. J. P. H. Jonxis, H. K. A. Visser, and J. A. Troelstra, Editors. Charles C Thomas. 96.
The Biology of the Trace Elements. K. H. Schütte. J. B. Lippincott Company. 96.
The Body Cell Mass and Its Supporting Environment: Body Composition in Health and Disease. F. D. Moore *et al.* W. B. Saunders Company. 96.
Transmethylation and Methionine Biosynthesis. S. K. Shapiro and F. Schlenk. University of Chicago Press. 160.
Vitamins and Coenzymes. A. F. Wagner and K. Folkers. Interscience Publishers. 64.
War Against Want: America's Food for Peace Program. G. S. McGovern. Walker and Company. 96.
Brain
changes in vitamin A deficiency, 313
copper proteins in, in Wilson's disease, N63
function, dependency on total body metabolism, SA289
glucose demands, in the premature infant, 10
lesions, from goldthioglucose, 252
lipids, composition in metabolic diseases, 265
structure, in malnourished children, SA65
weight, in Alzheimer's disease, 265
Breast Feeding
relation to polio susceptibility in infants, 131
relation to serum magnesium levels in the infant, 133
Butterfat
absorption test, in infants and children, 297
dietary, for production of atherosclerosis in baboons, 302
Calcification
defects, in scurvy, 274
kidney, on thrombogenic diet, effect of warfarin on, 112
Calcium
absorption, after ileal bypass, 178
balance, in osteoporosis, 6
excretion, of man on space flights, 63
intake
in the U.S.A., SA1
of American Negroes, SA161
requirement versus optimal intake, SA321
requirements, FAO recommendations, SA193
Caloric Intake
FAO recommendations, SA193
relation to protein malnutrition, 205

restriction, effect on brain structure in children SA65
Cancer
Burkitt's lymphoma, etiology of, 53
metastases, relation to blood coagulation, 41
mortality, in patients on anticoagulant therapy, 41
relation to hydrocarbon residues in cooked meat and fish, 268
Carbohydrate
dietary
effect on liver lipids in choline deficiency, 345
essential role of, N95
lipemia from, lipoprotein types in, 37
relation to composition of serum lipids, 292
relation to liver collagen and lipid levels, 183
relation to liver enzyme levels, 47
relation to liver glucose-6-phosphate dehydrogenase, 231
fructose
in lens tissue, relation to cataracts, 267
utilization, in premature infants, 10
galactose
detection, screening test for galactosemia, N256
feeding, for production of cataracts, 267
utilization, in premature infants, 10
glucose
blood levels
effect on single neurons in hypothalamus, 174
in alcoholism, 43
in obesity, 102
in premature infants, 10
relation to goldthioglucose toxicity, 252
dietary
relation to liver glucokinase activity, 279
relation to serum cholesterol levels, 231
feeding, in premature infants, effect on blood sugar levels, 10
formation, role of serine in, 279
glucose tolerance
in coronary heart disease, 323
relation to type of dietary sugar, 244
glycogen
in liver
after alcohol administration, 43
after force feeding of amino acid deficient diets, 27
oxidation, in heart muscle, 14
starch
dietary
effect on liver collagen and lipid levels, 183
effect on serum phospholipids, 292
effect on sugar tolerance, 244
sucrose
dietary
cariogenic action of, 275
effect on liver collagen and lipid levels, 183
effect on serum lipids, 292
effect on sugar tolerance, 244
relation to serum cholesterol levels, 231
intolerance in children, 101
surface, of lymphocytes, role in migration of, 80
xylose, absorption in man on space flights, 68
Carbon Dioxide
of rumen gas, metabolic fate of, 157
Caries (*see* **Teeth**)
Carnosine
urinary excretion, 295
Carotene
serum levels, in Lebanese children, SA97
Cereal Grains
vitamin B_6 values of, 78
Cereals
dietary, cariogenicity of, relation to dietary sodium, 117
Cheese
toxicity, in presence of MAO inhibitors, 326
Chelation
of iron with desferrioxamine, 72
Chick
arginine requirement for, effect of lysine on, 139
biological activities of vitamin A derivatives for, 248
germ free, enzymes in intestinal contents, N159
growth, after urease immunization, SA257
protein, dietary, effect on excretion of histidine and derivatives, 295
toxicity of vitamin A in, N63
vitamin A and E relationships in, 82
vitamin A deficiency in, CNS changes in, 313
vitamin E deficiency in, metabolic changes in, 90
Chick Peas
use in protein-rich foods, 272
Children
fat absorption tests in, 297
growth, effect of school lunch program on, 35
hypoproteinemia in, in celiac disease, 74
iron deficiency anemia, milk antibodies in, 299
iron poisoning in, treatment with desferrioxamine, 72
iron requirements for, SA129
kwashiorkor in, excretion of amino acids in, 137
Lebanese, growth and nutrition of, SA97
manganese balance in, 236
mental retardation in, in homocystinuria, 8
nutrition problems, in the U.S.A., SA1
saliva stimulation in, effect on caries incidence, 168
significance of body weight changes in, 199
sucrose intolerance in, 101
undernourished, central nervous system changes in, SA65
Chloramine-T
effect on retinol induced lysis of erythrocytes, 55
Chloride
content, of mouse milk, N319
excretion, of man on space flights, 68
Chlorinated Hydrocarbons
toxicity of, SA225
Cholate
inhibition, of mevalonate synthesis, 187
Cholesterol
absorption, site in intestine, 178
blood levels
changes after orotic acid feeding, 207
effect of dietary cholesterol on, 3
elevated, effect of hypercholesteremia on, 178
in man on space flights, 68
in the monkey, 177
relation to type of dietary carbohydrate, 231
content, of mouse milk, N319
deposition, relation to essential fatty acid deficiency, 144
dietary
effect on blood lipid pattern, 3
for production of atherosclerosis in baboons, 302
for production of experimental atherosclerosis, 329
for production of gallstones, 304
esterification, in different tissues, 240
esters
absorption of, 50
metabolism of, 108

feeding, changes in liver and serum cholesterol esters after, 115
synthesis, inhibition by bile salts, 187
Cholic Acid
dietary, for production of gallstones, 304
Choline
deficiency
in the baboon, 270
iron feeding in, production of hemochromatosis by, 189
liver fat in, 345
turnover, in the liver, N351
Chylomicrons
formation, effect of puromycin administration on, 181
fractionation of, 37
Coagulation
factors, effect of warfarin on, 112
Cod Liver Oil
peroxidized, dietary, effect on cation transport, 309
Coenzymes
coenzyme A, acyl-CoA compounds in liver, 246
coenzyme Q, treatment of vitamin E deficiency, 90
nicotinamide adenine dinucleotide, levels in liver, effect of chlorpromazine on, 58
Cold
environment, fasting in, use of salt supplementation, 45
exposure, effect on plasma free fatty acid levels, 238
Collagen
liver, effect of dietary carbohydrate on, 183
Color Blindness
genetic association with liver cirrhosis, 293
Colostrum
antibodies in, 131
Conditioned Reflexes
effect of weaning times on, 211
Cooking
broiled meats, hydrocarbon residues in, 268
effect on available niacin in foods, N286
Copper (*see* **Trace Elements**)
Corn
lysine content variations in, 336
oil
dietary
effect on diet induced cirrhosis, 349
effect on red cell phospholipids, 24
effect on unsaturated fatty acids in liver, 60
vitamin B_6 in, 78
Cow
food intake regulation in, 311

Death Rate
from cancer, relation to anticoagulant therapy, 41
from pesticides, SA225
Desferrioxamine
treatment of iron poisoning, 72
Detergents
effect on retinol induced lysis of erythrocytes, 55
Diabetes
effect on acyl-CoA compounds in liver, 246
for production of experimental cataracts, 267
insulin transport by placenta, 327
lipoprotein types in, 37
liver serine dehydratase activity in, 279
metabolism in, effect of alcohol on, 43
preclinical, in coronary heart disease, 323
production in sand rats, 340
Dialuric Acid
effect on retinol induced lysis of erythrocytes, 55
Diarrhea
in children
in Lebanon, SA97
in sucrose intolerance, 101
Diet
American Negro, SA161
carbohydrate, relation to heart disease, 292
cariogenic, relation to dietary sodium, 117
cariostatic, role of phosphates in, 307
chemically defined, 231
fat
after weaning, relation to learning ability, 211
relation to serum fatty acids, 60
for production of gallstones, 304
fortification, with peanut-soybean flour, 75
high carbohydrate, effect on liver collagen and lipid, 183
high fat, effect on urate excretion, 171
leguminous plants, relation to Burkitt's lymphoma, 53
maternal, effect on growth of offspring, 84
on manned space flights, 68
Pedi, 196
production of experimental cataracts, 267
protein free, effect on erythropoiesis, 242
protein rich, for Middle Eastern countries, 272
relation to intelligence, N95
relation to levels of liver enzymes, 47
role of carbohydrate in, N95
selection, education for, SA353
survey, in the U.S.A., SA1
thrombogenic, effect on blood lipids, 112
treatment
of gastric ulcer, 134
of maple sugar urine disease, 260
Disease
acromegaly, fecal calcium in, 6
allergic, milk antibodies in, 299
Alzheimer's, brain lipids in, 265
celiac, gastrointestinal leakage in, 74
congenital galactosemia, screening test for, N256
gastric ulcer, choice of antacid treatment for, 134
Gaucher's, brain lipids in, 265
homocystinuria, mental deficiency in, 8
idiopathic hemochromatosis, iron distribution in, 170
malabsorption syndrome, use of medium chain triglycerides in, 71
maple syrup urine disease, dietary treatment of, 260
metachromatic leucodystrophy, brain lipids in, 265
poliomyelitis, susceptibility, relation to breast feeding, 131
siderosis, iron distribution in, 170
Tay-Sachs, brain lipids in, 265
tropical sprue, use of medium chain triglycerides in, 71
Wilson's
dietary copper in, 301
tissue copper proteins in, N63
Drugs (*see also* **Antibiotics, Antimetabolites**)
anticoagulant, effect on cancer metastases, 41
chlorpromazine, nicotinamide-sparing action of, 58
desferrioxamine, treatment of iron poisoning, 72
effect on brain metabolism, SA289
isoniazid, ingestion, riboflavin as a marker for, 40

isoproterenol, taurine excretion after, 284
MAO inhibitors, effect on toxicity of foods, 326
penicillamine, effect on copper excretion in Wilson's disease, 301
plasmin, effect on cancer metastases, 41
plasmocid, taurine excretion after, 284
tetracycline, administration in pregnancy, effect on caries of offspring, 281
thalidomide, effects in riboflavin and folic acid deficiency, 221
tolbutamide, effect on blood sugar in premature infants, 10
warfarin, effect on blood lipid levels, 112

Ear
otosclerosis, effect of fluorides on, N128
Egg
production, effect of excess dietary vitamin A on, N63
Electrocardiogram
changes, in fat deficiency, 213
Electron Microscopy
of atherosclerotic lesion, 155
Electrophoresis
aryl-esterases in human blood, 166
plasma lipoproteins, 37
Embryo
development, in chick eggs, role of retinoic acid in, 248
Emu
arteriosclerosis in, N255
Endocrine
glands, in offspring of protein-calorie deficient mothers, 84
Energy
intake, in ruminants, 311
Environment
cold
effect on plasma free fatty acid levels, 238
fasting in, use of salt supplementation, 45
Enzymes
acetyl-CoA carboxylase
effect of fasting and refeeding on, 151
effect of insulin on synthesis of, 153
adenosine triphosphate, activity in essential fatty acid deficiency, 119
alkaline phosphatase, serum level in vitamin A toxicity, 263
D-amino acid oxidase, effect of thalidomide on, 221
amylase
in intestinal contents of germ free chicks, N159
in pancreas, after force feeding of amino acid deficient diets, 27
aryl-esterases, in human blood, 166
beta-glucuronidase, in lysosomes, in vitamin E deficient chicks, 90
changes in tissues, after force feeding of amino acid deficient diets, 27
cholesterol esterase, role in absorption of cholesterol esters, 50
citrate cleavage, effect of acyl-CoA compounds on, 246
citrate synthetase, effect of acyl-CoA compounds on, 246
deficiency of, in kwashiorkor, 137
fatty acid synthesizing, effect of fasting on, 151
glucokinase
in liver
effect of diet on, 47
effect of glucose supply on, 279
glucose-6-phosphatase, in liver, effect of diet on, 47
glucose-6-phosphate dehydrogenase
effect of starvation on, 151
in liver
effect of diet on, 47
relation to type of dietary carbohydrate, 231
glucose phosphate isomerase, in liver, effect of diet on, 47
glutamate oxalacetate transaminase, in liver, in aflatoxin poisoning, 331
glycosidase, treatment of lymphocytes, effect on migration of, 80
immunity to, SA257
induction, role of insulin in, 153
lecithin-cholesterol fatty acid transferase, specificity of, 240
lipase, in intestinal contents of germ free chicks, N159
mevalonate oxidoreductase, inhibition by bile salts, 187
monamine oxidase, inhibitors of, effect on toxicity of foods, 326
phosphoglucomutase, in liver, effect of diet on, 47
phosphogluconate dehydrogenase
effect of starvation on, 151
in liver, effect of diet on, 47
phosphorylase
in liver
after ethionine administration, 125
effect of diet on, 47
plasma levels, in man on space flights, 68
proteolytic, in intestinal contents of germ free chicks, N159
retinol esterase, distribution of, 218
serine dehydratase, in liver, effect of diabetes and hormones on, 279
sucrase, genetic absence of, 101
threonine dehydratase
identity with serine dehydratase, 279
in liver, effect of glucagon on, 279
transketolase, in erythrocytes, use in assessing thiamine deficiency, 234
trypsin, in pancreas, after force feeding of amino acid deficient diets, 27
UDP-glucosyltransferase in liver, effect of diet on, 47
urease, antibodies to, SA257
vesicular glands, for conversion of linoleic acid to prostaglandins, 141
xanthine oxidase, in liver, of animals fed peanut-protein supplementation, 75
Epinephrine (*see* **Hormones**)
Erythrocyte
formation, feedback control of, 16
morphology, in riboflavin deficiency, 197
phospholipids in, effect of dietary fat on, 24
swelling, effect of retinol on, 55
transketolase in, use in assessing thiamine deficiency, 234
Erythropoiesis
feedback control of, 16
relation to iron absorption, N287
Erythropoietin
chemical nature of, 16
production
in protein starvation, 242
in riboflavin deficiency, 197
Esterification
cholesterol, in different tissues, 240
retinol, in microsomes, 218

Estrogens (*see* **Hormones**)
Ethanol
effect on liver lipid metabolism, 338
Ethionine (*see* **Antimetabolites**)
Exercise
effect on plasma free fatty acid levels, 238
Eye
cataracts
congenital, from niacin deficiency in pregnancy, N159
experimental, 267
color blindness, genetic association with liver cirrhosis, 293
vision
activity of retinoic acid for, 248
function of epoxy-vitamin A aldehyde in, 332

FAO
calorie recommendations, SA193
Fasting
accumulation of fat in heart in, 14
blood insulin and growth hormone levels in, 102
effect on fatty acid synthesizing enzymes in liver, 151
in cold environment, use of salt supplementation, 45
premature infants, effect on blood sugar levels, 10
urate excretion in, 171
Fat
absorption, tests in infants and children, 297
accumulation, in heart, during fasting, 14
blood levels
changes after orotic acid feeding, 207
effect of dietary cholesterol on, 3
effect of warfarin on, 112
body, relation to effects of high and low pressure, 149
composition in brain, in metabolic diseases, 265
content, of mouse milk, N319
deficiency
effect on heart metabolism, 213
effect on phospholipid composition in mitochondria, 216
oxidative phosphorylation in, 119
depots, storage of chlorinated hydrocarbons in, SA225
diet, after weaning, relation to learning ability, 211
dietary
effect of saturation on blood lipid pattern, 3
effect on intestinal synthesis of thiamine, 334
effect on red cell phospholipid and permeability, 24
lipemia from, lipoprotein types in, 37
relation to composition of lymph lipids, 343
relation to liver enzyme levels, 47
relation to treatment of gastric ulcer, 134
relation to urate excretion, 171
fecal excretion, correlation with fat absorption, 297
feeding, effect on acyl-CoA compounds in liver, 246
liver
effect of dietary carbohydrate on, 183, 244
effect of ethanol intoxication on, 338
in aflatoxin poisoning, 331
in atherosclerosis in baboons, 302
in choline deficiency, 270, 345
in diet-induced cirrhosis, 349
medium chain triglycerides, use in sprue, 71
metabolism
effect of orotic acid on, 207
in the fetus, 166
synthesis
in liver, effect of ethanol intoxication on, 338
role of microsomes in, 92
transport, relation to protein synthesis inhibition, 181
turnover of saturated and unsaturated fatty acids in, 232
Fatty Acids
acyl-CoA compounds in liver, effect of diet on, 246
arachidonate, in red cell membrane, relation to permeability, 24
blood levels, effect of alcohol on, 43
composition
of brain of infants, 265
of liver fat, after carbohydrate feeding, 183
of red cell membranes, 24
deficiency, effect on phospholipid composition in mitochondria, 216
dietary, effect on composition of cholesterol esters, 115
elaidic, metabolism of, 12
essential
deficiency
effect on mitochondrial oxidation, 119
heart changes in, 213
relation to atherosclerosis, 144
free
plasma levels, effect of cold exposure on, 238
turnover of saturated versus unsaturated, 232
in cholesterol, after cholesterol feeding, 115
in cholesterol esters, in different tissues, 240
in fish oils, 51
in liver, effect of fasting on, 151
in mitochondrial phospholipids, in fat deficiency, 216
linoleate
dietary, effect on diet induced cirrhosis, 349
geometric isomers of, metabolism of, 12
incorporation into phospholipid, in fat deficiency, 213
metabolism of, 232
linolenate, conversion to prostaglandins, 141
nonesterified, blood levels, in obesity, 102
oleic
effect on retinol induced lysis of erythrocytes, 55
geometric isomers of, metabolism of, 12
oxidation
effect of CoA on, 246
in heart muscle, 14
palmitate
esterification of retinol by, 218
metabolism of, 232
peroxidation, in tissues in senility, SA289
peroxidized, dietary, effect on cation transport, 309
polyunsaturated, synthesis in liver microsomes, 122
release from adipose tissue, effect of prostaglandins on, 141
serum, relation to dietary fat intake, 60
short chain, in human cord blood, 166
synthesis
effect of fasting on, 151
in liver, role of microsomes in, 92
possible regulation by acyl-CoA compounds, 246
role of insulin in, 153

transesterification of, in cholesterol metabolism, 108
unsaturated
dietary, effect on intestinal thiamine synthesis, 334
in liver, relation to dietary fat, 60
Feces
calcium in, 6
Feedback
control
of antibody synthesis, 19
of erythropoiesis, 16
Feeding Center
effect of glucose on, 174
Fenugreek
niacin in, effect of cooking on, N286
Fetus
death, in niacin deficiency, 58, N159, N223
resorption, in niacin deficiency, N159
Fibrin
role in cancer metastases, 41
Fish
oils, fatty acid composition of, 51
products, for protein malnutrition, 282
smoked, hydrocarbon residues in, 268
Flour
peanut-soybean, for protein fortification, 75
wheat, cariogenic properties of, 275
Fluoride (*see* **Trace Elements**)
Folacin
deficiency, effect of thalidomide in, 221
Food
composition, education in, SA353
habits, education in, SA353
intake
control, in hypothalamus, 174, 277
decrease by excess dietary methionine, 202
regulation by body temperature, 104
regulation in ruminants, 311
variations in, effect on body weight changes, 199
pesticide residues, toxicity in foods, SA225
preferences, changes on school lunch program, 35
protein products, peanut-soybean, 75
sources, of the American Negro, SA161
supply, of the world, SA193
supply, requirements in future, N351
toxicity, effect of MAO inhibitors on, 326
vitamin B_6 values of, 78
Force Feeding
amino acid deficient diets, effect on rats, 27
Fructose (*see* **Carbohydrate**)
Fruit
in diet of Pedi, 196

Galactose (*see* **Carbohydrate**)
Galactosemia
screening test for, N256
Gallstones
experimental production of, 304
Gastrointestinal
leakage of protein, in celiac disease, 74
Genetics
absence of sucrase, 101
homocystinuria, 8
hyperglycinemia, N191
inheritance of low β-lipoproteins, 181
maize, lysine content differences, 336
maple sugar urine disease, dietary treatment of, 260
relation of liver cirrhosis and color blindness, 293
Globulin
antibody synthesis, feedback control of, 19
serum, in vitamin A deficiency, effect of vitamin E on, 82
Gluconeogenesis
effect of alcohol on, 43
role of serine metabolism in, 279
Glucose (*see* **Carbohydrate**)
Glycogen (*see* **Carbohydrate**)
Gold
deposition, in hypothalamus, after goldthioglucose, 252
Goldthioglucose
brain lesions from, 252
Growth
activity of retinoic acid for, 248
children
effect of school lunch program on, 35
in Lebanon, SA97
depression, from excess dietary lysine, 139
failure
in children with sucrose intolerance, 101
in homocystinuria, 8
in urease immunized animals, SA257
inhibition, by excess dietary methionine, 202
Growth Hormone (*see* **Hormones**)
Guinea Pig
cartilage changes in scurvy, 274

Heart
changes, on thrombogenic diet, effect of warfarin on, 112
coronary disease, preclinical diabetes in, 323
disease
antacid treatment of ulcer in, 134
in the ostrich, rhea, and emu, N255
relation to dietary carbohydrates, 292
fat accumulation in, in fasting, 14
fatty acid composition, effect of fasting on, 151
lesions, in primates, 302
metabolism, effect of fat deficiency on, 213
rate, effect of prostaglandins on, 141
Heat
production, relation to dietary protein, N30
Hemochromatosis
experimental, in the rat, 189
stainable iron in, 262
Hemoglobin
incorporation of iron into, in protein starvation, 242
levels
effect of excess dietary methionine on, 202, 317
in children, in Lebanon, SA97
in offspring of dietary restricted mothers, 84
in riboflavin deficiency, 87, 197
in the U.S.A., SA1
increases on school lunch program, 35
Hemosiderin
in bone marrow, estimation of body iron stores, SA129
in tissues, relation to stainable iron, 262
Hemosiderosis
on thrombogenic diet, effect of warfarin on, 112
Histology
bone marrow, in protein starvation, 242
cartilage, in scurvy, 274
heart muscle, in fasting, 14
hypothalamus, after goldthioglucose, 252
Homocystine
dietary, effect on methionine toxicity, 317
Hormones
adrenal, counteraction by prostaglandins, 141

androgen, effect on bile flow, 304
epinephrine
counteraction by prostaglandins, 141
effect on blood sugar levels, in premature infants, 10
estrogen, effect on bile flow, 304
glucagon
effect on blood sugar levels, after alcohol administration, 43
effect on blood sugar levels, in premature infants, 10
effect on liver threonine dehydratase activity, 279
growth hormone
blood levels, in obesity, 102
effect on offspring of dietary restricted mothers, 84
hydrocortisone, effect on liver dehydratase activity, 279
insulin
activity on different carbohydrate diets, 244
blood levels, in obesity, 102
passage through placenta, 327
response in hypothalamus, 174
role in enzyme induction, 153
pituitary, effect on liver serine dehydratatase activity, 279
thyroxin, effect on liver serine dehydratase activity, 279
House Fly
vitamin A deficiency in, 89
Hydrocarbon
residues in broiled meats, 268
β-Hydroxybutyrate
administration, effect on urate excretion, 171
Hypercholesteremia
effect of ileal bypass on, 178
Hyperglycinemia
a genetic defect, N191
Hyperkeratosis
in riboflavin deficient baboons, 87
Hyperphagia
after hypothalamic stimulation, 277
from goldthioglucose, 252
Hypertension
from excess vitamin A, in infants, 263
Hypoglycemia
in alcoholism, 43
Hypoproteinemia
in celiac disease, 74
Hypothalamus
lesions, after goldthioglucose, 252
single neurons in, effect of glucose on, 174
stimulation, effect on food intake, 277

India
school lunch program in, 35
use of fish-potato flake mixture for protein malnutrition, 282
Indole
metabolism, in schizophrenia, SA289
Infants
copper deficiency in, 164
fat absorption tests in, 297
fatty acid composition of brain, 265
iron requirements for, SA129
maple sugar urine disease, dietary treatment of, 260
polio susceptibility in, relation to breast feeding, 131
premature, hypoglycemia in, 10
serum magnesium levels, relation to breast feeding, 133
significance of body weight changes in, 199
sucrose intolerance in, 101
tissue copper proteins in, N63
undernourished, brain structure in, SA65
vitamin A toxicity in, 263
Infection
relation to breast feeding, 131
S. mansoni, effect on collagen production in liver, 183
Insects
vitamin A requirements for, 89
in diet of Pedi, 196
Institute of Food Technologists
committee on World Food Programs, N31
Insulin (*see* **Hormones**)
Intellectual
capacity, in malnourished children, SA65
Intelligence
relation to diet, N95
relation to weaning time, 211
International Congress of Food Science and Technology, N191
Intestine
absorption
of calcium, in osteoporosis, 6
of cholesterol esters, 50
of fat, in infants and children, 297
of iron
in choline deficiency, 189
in man, SA129
in polycythemic mice, N287
of medium chain triglycerides, in sprue, 71
of vitamin B_{12}, SA33
of xylose, in man on space flights, 68
cholesterol esterification in, 240
enzymes in, in germ free chicks, N159
ileal bypass, effect on hypercholesteremia, 178
mucosal exfoliation, iron losses by, SA129
protein leakage in, in celiac disease, 74
sucrase absence in, 101
taurine metabolism in, 284
thiamine synthesis in, effect of dietary fat on, 334
Imidazoleacrylic Acid
excretion in kwashiorkor, 137
Immunology
immunity to enzymes, SA257
role of thymus in immunological competence, 146
Intrinsic Factor
role in vitamin B_{12} absorption, SA33
Iodine (*see* **Trace Elements**)
Iron
absorption, in polycythemic mice, N287
balance, in man, SA129
deficiency, milk antibodies in, 299
deficiency anemia, in the U.S.A., SA1
deposition, in spleen, with excess dietary methionine, 202, 317
distribution, in idiopathic hemochromatosis and siderosis, 170
feeding, on choline deficient diet, in production of hemochromatosis, 189
incorporation into hemoglobin, in protein starvation, 242
intakes, in the U.S.A., SA1
requirement, versus optimal intake, SA321
serum levels, in riboflavin deficiency, 197
stainable, significance of, 262
toxicity, treatment with desferrioxamine, 72

Irradiation
effect on erythropoietin destruction, 16
taurine excretion after, 284

Ketonuria
in obese subjects, during fasting, 102
Ketosis
after cold exposure, 238
effect of alcohol on, 43
urate excretion in, 171
Kidney
calcification, on thrombogenic diet, effect of warfarin on, 112
changes
in aflatoxin poisoning, 331
on thrombogenic diet, effect of warfarin on, 112
metabolism of anhydrovitamin A in, 341
nephrosis, lipoprotein types in, 37
production of erythropoietin by, 16
taurine metabolism in, 284
urate excretion, in hyperketonemia, 171
weight, changes, from excess dietary methionine, 202, 317
Kwashiorkor
amino acid excretion in, 137
development of, relation to caloric intake, 205
in rats, by force feeding of amino acid deficient diets, 27

Lactate
blood levels
effect of alcohol on, 43
in premature infants, 10
Lactation
diet during, effect on growth of offspring, 84
Learning Ability
relation to weaning time, 211
Lebanon
growth and nutrition of children in, SA97
Letters to the Editor
Allison, M. J., 286
Briggs, G. M., 95
Dougherty, R. W., 286
Hartsook, E. W., 30
Hershberger, T. V., 30
Hurley, L. S., 223
Jackson, J. M., 32
McFie, J., 95
Pike, R. L., 159
Mullenax, C. H., 286
Linseed
oil, feeding, effect on unsaturated fatty acids in liver, 60
Lipemia
lipoprotein types in, 37
Lipids (*see* **Fat, Fatty Acid, Phospholipid, etc.**)
Lipoprotein
beta, deficiency in inherited disease, 181
effect on liver lipid synthesis, 92
metabolism, effect of orotic acid on, 207
plasma, electrophoresis of, 37
Liver
D-amino acid oxidase in, effect of thalidomide on, 221
cholesterol esterification in, 240
cholesterol esters, changes after feeding cholesterol, 115
cholesterol in, in experimental atherosclerosis, 329
choline turnover in, N351
cirrhosis
diet induced, effect of linoleic acid on, 349
genetic association with color blindness, 293
in monkeys, from aflatoxin, 331
collagen in, effect of dietary carbohydrate on, 183
copper proteins in, in Wilson's disease, N63
disease, stainable iron in, 262
enzymes, levels, relation to diet, 47
fat
effect of dietary carbohydrate on, 183, 244
effect of ethanol intoxication on, 338
in atherosclerosis in baboons, 302
in diet induced cirrhosis, 349
fatty
from dietary orotic acid, 207
in choline deficiency, 345
in baboons, 270
fatty acid synthesis in
effect of feeding on, 151
role of microsomes in, 92
fish, oils in, fatty acid composition of, 51
glucose-6-phosphate dehydrogenase in, relation to type of dietary carbohydrate, 231
glycogen
after alcohol administration, 43
after force feeding of amino acid deficient diets, 27
iron deposition in
from excess dietary methionine, 317
in siderosis, 170
lipids, composition, relation to dietary fat, 343
metabolites of anhydrovitamin A in, 341
microsomes, synthesis of polyunsaturated fatty acids in, 122
NAD levels in, effect of chlorpromazine on, 58
non-hemoglobin iron in, for estimation of body iron stores, SA129
pathology, during experimental production of gallstones, 304
phosphorylase, after ethionine administration, 125
protein synthesis, effect of threonine deprivation on, 111
serine dehydratase in, effect of diabetes and hormones on, 279
source of secondary particles in lipemia, 37
taurine metabolism in, 284
unsaturated fatty acids in, relation to dietary fat, 60
vitamin A in, after excess dietary vitamin A, N63
vitamin E in, effect of vitamin A on, 82
weight
changes with excess dietary methionine, 202
of animals with peanut-soybean fortified diet, 75
Lymphocyte
migration of, mechanism of, 80
transformation, by bean extracts, 53
Lysosome
beta-glucuronidase in, in vitamin E deficient chicks, 90
possible role in metamorphosis, 106

Magnesium
serum levels in infants, relation to breast feeding, 133
Maize
lysine content, variations in, 336
niacin in, effect of cooking on, N286

Malic Acid
stimulant of saliva flow, 168
Malnutrition
effect on central nervous system, SA65
in infants, copper deficiency in, 164
in the world, SA193
problems, in the U.S.A., SA1
protein
effect of caloric intake on, 205
fish-potato flake mixture for, 282
in the Middle East, use of protein-rich foods, 272
Mammary Gland
transfer of serum protein to milk in, 324
Manganese (see **Trace Elements**)
Manual for Nutrition Surveys, N224
Maternal
diet, effect on growth of offspring, 84
Meat
broiled, hydrocarbon residues in, 268
frozen, vitamin losses in, 18
protein, dietary, effect on excretion of histidine and derivatives, 295
Menstruation
effect on body weight changes, 199
Mental
development, effect of school lunch program on, 35
deficiency
in homocystinuria, 8
in hyperglycinemia, N191
health, nutrition in, SA289
Metamorphosis
tadpoles, effect of vitamin A on, 106
Methane
of rumen gas, metabolic fate of, 157, N286
Mevalonate
synthesis, bile acid inhibition of, 187
Microsomes
esterification of retinol in, 218
liver
cholesterol esterification in, 240
fat synthesis in, 92
fat synthesis in, effect of ethanol on, 338
fatty acid synthesis in, 122
Middle East
countries, protein-rich food for, 272
Milk
antibodies in, 131
consumption, of American Negroes, SA161
content of carbon dioxide and methane from rumen contents, 157
mouse, composition of, N319
protein
antibody to, 299
origin of, 314
treatment of gastric ulcer, evaluation of, 134
Mitochondria
cholesterol esterification in, 240
copper binding by, N63
fatty acid oxidation in, effect of CoA on, 246
oxidative phosphorylation in, in fat deficiency, 119
phospholipid composition, effect of fat deficiency on, 216
role in synthesis of fatty acids, 122
swelling
effect of CoA on, 246
effect of retinol on, 55
Monkey
arterial lesions in, 177, 302
cirrhosis in, from aflatoxin, 331
Mouse
milk, composition of, N319
Mucoprotein
phytohemagglutinins, lymphocyte transformation by, 53
Muscle
changes, after force feeding of amino acid deficient diets, 27
dystrophy, in vitamin E deficient chicks, 90
effect of prostaglandins on, 141
necrosis, taurine excretion in, 284

Negro
nutritional status of, SA161
Nerve
changes
in offspring of protein-calorie deficient mothers, 84
in vitamin A deficiency, 313
system, effect of malnutrition on, SA65
Niacin
available, in foods, effect of cooking on, N286
deficiency, fetal death from, 58, N159, N223
losses, during frozen meat storage, 18
Notes
American Institute of Nutrition, 96
Arteriosclerosis in the Ostrich, Rhea, and Emu, 255
Composition of Mouse Milk, 319
Congenital Galactosemia, 256
Effect of Cooking on the Free Niacin Content of Foods, 286
Enzymes in Intestinal Contents of Conventional and Germfree Chickens, 159
High Resolution Screening of Aminoacidurias, 32
Hyperglycinemia, 191
Inadequacy of Rose Hips as a Source of Ascorbic Acid, 223
Iron Absorption in Polycythemic Mice, 287
Manual for Nutrition Surveys, 224
"Moderate" Excesses of Vitamin A and Egg Production, 63
Project Head Start—A Beginning, 320
Second International Congress of Food Science and Technology, 191
Sodium Fluoride and Otosclerosis, 128
The Freedom from Hunger Campaign Completes Five Years, 351
Tissue Copper Proteins in Wilson's Disease, 63
Turnover of Choline in the Liver, 351
Nutrition
and mental health, SA289
education, SA353
optimal intakes of nutrients, SA321
problems, in the U.S.A., SA1
school lunch program, benefits of, 35
survey
in Lebanon, SA97
manual for, N224
of American Negroes, SA161
of world's food supply, SA193

Obesity
blood insulin and growth hormone levels in, 102
from goldthioglucose, 252
in sand rats, association with diabetes, 340
in the U.S.A., SA1

relation to effects of high and low pressure, 149
treatment by fasting, urate excretion in, 171
Orotic Acid
fatty liver from, 207
Osteoporosis
calcium balance in, 6
Ostrich
arteriosclerosis in, N255
Otosclerosis
effect of fluorides on, N128
Oxidation
fatty acids
effect of CoA on, 246
effect of cold stress on, 238
in heart muscle, 14
geometric isomers of linoleic and oleic acids, 12
Oxidative Phosphorylation
in fat deficiency, 119

Pancreas
changes, after force feeding of amino acid deficient diets, 27
cholesterol esterification in, 240
damage, from excess dietary methionine, 317
pancreatitis, lipoprotein types in, 37
Parotid Gland
histology, changes with excess dietary methionine, 202
Pathology
aflatoxin poisoning, 331
aorta, in experimental atherosclerosis, 329
atherosclerotic lesion, electron microscopy of, 155
homocystinuria, 8
iron poisoning, 72
liver, during experimental production of gallstones, 304
siderosis, 170
stainable iron as index of disease, 262
vitamin A deficiency, in the chick, 313
Peanut
plus soybean flour, for protein fortification, 75
Peas
niacin in, effect of cooking on, N286
Pedi
nutrition of, 196
Permeability
cells, in vitamin A deficiency, 82
red cell, effect of dietary fat on, 24
Peroxidation
effects, in vitamin E deficient chicks, 90
Pesticides
residues in foods, SA225
Phosphate
salts, as cariostatic agents, 307
Phospholipid
blood levels
changes after orotic acid feeding, 207
effect of dietary cholesterol on, 3
cephalin, in serum, effect of dietary carbohydrates on, 292
composition in mitochondria, effect of fat deficiency on, 216
ganglioside, in brain, in Tay-Sachs disease, 265
incorporation of fatty acids in, 12
incorporation of linoleate in, in fat deficiency, 213
red cell, effect of dietary fat on, 24
serum, effect of dietary carbohydrate on, 292
sphingomyelin
in brain, in Niemann-Pick's disease, 265
in serum, effect of dietary carbohydrate on, 292
sulfatide, in brain, in metachromatic leucodystrophy, 265
synthesis
effect of ethanol on, 338
rate of, N351
role of microsomes in, 92
Phosphorus
in cow's milk, relation to serum magnesium levels, 133
Phytohemagglutinins
lymphocyte transformation by, 53
Pinocytosis
role in vitamin B_{12} absorption, SA33
Pituitary
regulation of NAD levels by, 58
regulation of serine dehydratase by, 279
Placenta
cation transport in, in vitamin E deficiency, 309
insulin transport in, 327
Polycythemia
in mice, iron absorption in, N287
Polyvinylpyrrolidone
use in study of gastrointestinal protein leakage, 74
Potassium
excretion
during fasting, effect of salt supplementation on, 45
of man on space flights, 68
release from erythrocytes, effect of retinol on, 55
transport in placenta, in vitamin E deficiency, 309
Potato
products, for protein malnutrition, 282
Pregnancy
demands on iron stores, SA129
diet during, effect on growth of offspring, 84
insulin transport by placenta, 327
niacin deficiency in
congenital cataracts from, N159
fetal death from, 58
tetracycline during, effect on caries of offspring, 281
toxemia of, experimental studies, 309
Pressure
effects, in obesity, 149
Prostaglandins
formation from linoleic and linolenic acids, 141
Protein
biological value, estimation by enzymatic digestion method, 186
collagen, in liver, effect of dietary carbohydrate on, 183
content, of mouse milk, N319
copper-containing, in tissues, in Wilson's disease, N63
dietary
relation to heat production, N30
relation to liver dehydratase activity, 279
relation to liver enzyme levels, 47
relation to urinary excretion of histidine and derivatives, 295
foods, for Middle Eastern countries, 272
fortification, with peanut-soybean flour, 75
gastrointestinal leakage of, in celiac disease, 74
glutelin, variations in corn, 336
intake, of American Negroes, SA161
malnutrition

effect of caloric intake on, 205
effect on brain structure in children, SA65
fish-potato flake mixture for, 282
metabolism
in kwashiorkor, 137
in riboflavin deficient baboons, 87
milk
antibody to, 299
origin of, 314
nutrition, in the U.S.A., SA1
optimal intake, SA321
requirements
discussion, SA193
for salmon, 21
serum, transfer to milk, 314
serum levels, in children in Lebanon, SA97
starvation, effect on erythropoiesis, 242
synthesis
after force feeding of amino acid deficient diets, 27
effect of threonine deprivation on, 111
effect of vitamins A and E on, 82
induction by insulin, 153
inhibition
by ethionine, 125
effect on lipid transport, 181
Protein Efficiency Ratio
of fish-potato flake mixture, 282
Prothrombin
levels, effect of warfarin on, 112
Public Health
screening test for congenital galactosemia, N256
survey, of children in Lebanon, SA97
PVP
gradient technique, for lipoproteins, 37
Pyridoxal (*see* **Vitamin B_6**)
Pyridoxamine (*see* **Vitamin B_6**)
Pyridoxine (*see* **Vitamin B_6**)
Pyrimidine
excretion, in young men, 234

Rabbit
experimental atherosclerosis in, 329
Reproduction
activity of retinoic acid for, 248
Requirements
amino acids, for salmon, 21
calories, FAO recommendations, SA193
choline, for the baboon, 270
copper, for the infant, 164
glucose, by brain of premature infants, 10
iron, for man, SA129
manganese, for children, 236
nutrients, versus optimal intake, SA321
Respiration
mitochondria, in essential fatty acid deficiency, 119
Retina
esterification of retinol in, 218
Retinoic Acid
biologic activity of, 248
Retinol
esterification in microsomes, 218
Rhea
arteriosclerosis in, N255
Riboflavin
deficiency
anemia in, 197
effect of thalidomide in, 221
in baboons, 87
losses, during frozen meat storage, 18
use as a marker for dietary intake, 40
Ribonucleic Acid
synthesis, in pyridoxine deficiency, 250
Ribosome
activity, in threonine deprivation, 111
ribonucleic acid synthesis in, in pyridoxine deficiency, 250
Rice
niacin in, effect of cooking on, N286
vitamin B_6 in, 78
Rose Hips
ascorbic acid in, N223
Rumen
gas, metabolic fate of, 157
Ruminants
energy intake perception in, 311

Saliva
stimulation, effect on caries incidence, 168
Salmon
amino acid requirements for, 21
Salt
dietary, relation to development of diabetes in sand rats, 340
supplementation, effect on water conservation in fasting, 45
Sand Rats
production of diabetes in, 340
Satiety Center
effect of glucose on, 174
Schizophrenia
indole metabolism in, SA289
School
lunch program, benefits of, 35
Scurvy
cartilage changes in, 274
Seasonal Variations
in vitamin B_6 in corn, 78
Senility
fatty acids in, SA289
Sesame Flour
use in protein-rich foods, 272
Sex Differences
in experimental production of gallstones, 304
in susceptibility to decompression, 149
in thalidomide toxicity, 221
Sheep
body temperature measurements in, 104
food intake regulation in, 311
Skin
changes, in riboflavin deficient baboons, 87
exfoliation, iron losses by, SA129
homografts, rejection, in thymectomized mice, 146
lesions, in infants, from excess vitamin A, 263
Sodium
dietary
effect on sodium and water conservation in fasting, 45
relation to dental caries, 117
excretion, of man on space flights, 68
transport in placenta, in vitamin E deficiency, 309
Sorbitol
dietary, role in prevention of caries, 168
in lens tissue, relation to cataracts, 267
South Africa
Pedi, nutrition of, 196
Soybean
flour
use in protein-rich foods, 272
vitamin B_6 in, 78
plus peanut flour, for protein fortification, 75

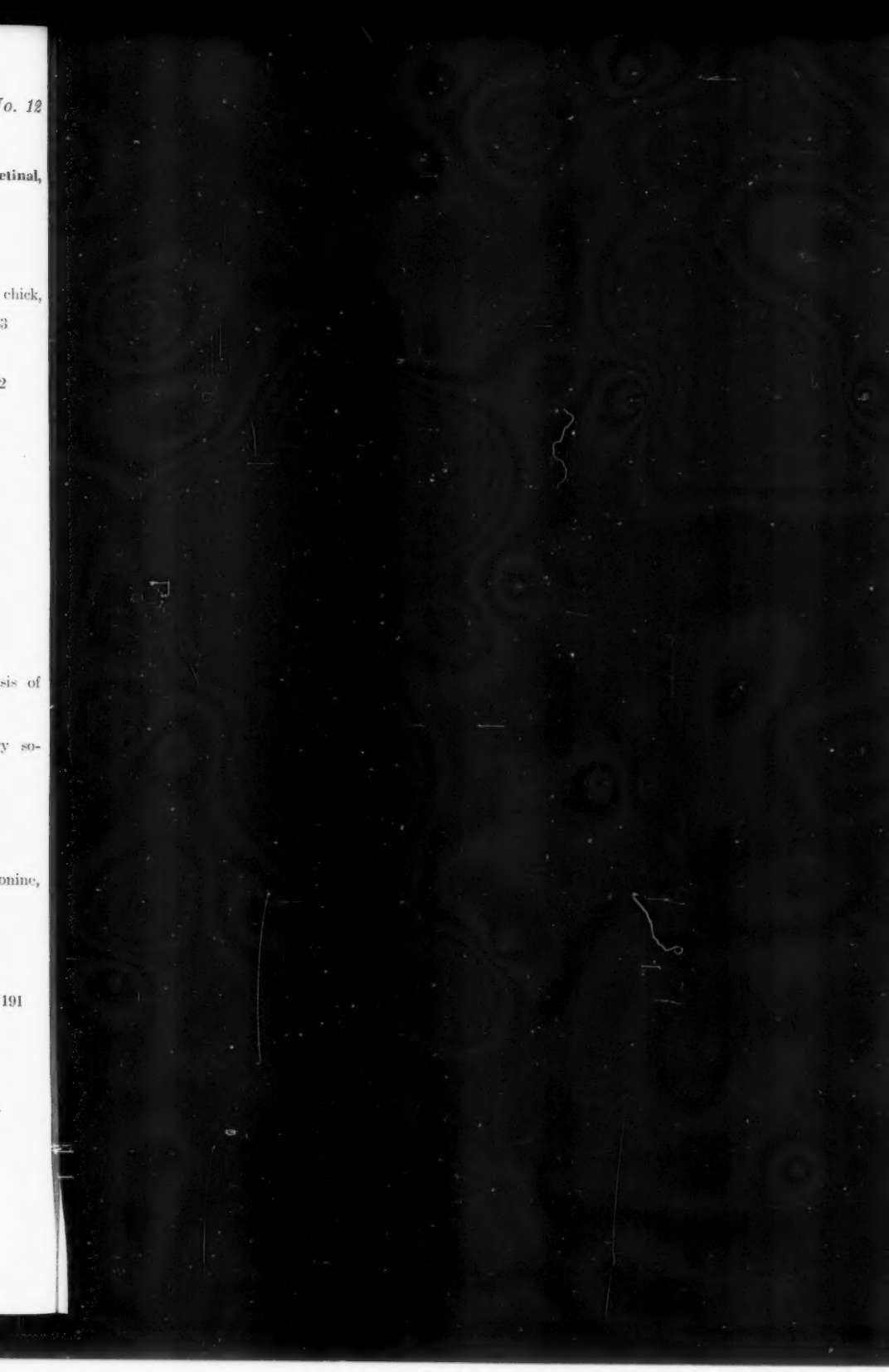
raw, effect of feeding on cystine metabolism, 346
Space
manned flights, physiologic effects of, 68
Special Articles
Coursin, D. B., Effects of Undernutrition on Central Nervous System Function, 65
Finch, C. A., Iron Balance in Man, 129
Goldsmith, G. A., Clinical Nutritional Problems in the United States Today, 1
Greaves, J. P., The Role of the Nutritionist in the Assessment of Nutritional Goals, 193
Hodges, R. E., The Toxicity of Pesticides and Their Residues in Food, 225
Horwitt, M. K., Nutrition in Mental Health, 289
Johnson, O. C., Nutrition Education—What is the Goal?, 353
Mayer, J., The Nutritional Status of American Negroes, 161
Visek, W. J., Enzyme Immunity in Nutrition, 257
Walker, A. R. P., Optimal Intakes of Nutrients, 321
Wilson, T. H., Intrinsic Factor and B_{12} Absorption—A Problem in Cell Physiology, 33
Woodruff, C. W., Growth and Nutrition of Lebanese Children, 97
Species Differences
in fatty acid composition of fish oils, 51
in phospholipids of red cell, 24
Spleen
changes, after force feeding of amino acid deficient diets, 27
cholesterol in, in experimental atherosclerosis, 329
hemosiderosis in, on thrombogenic diet, effect of warfarin on, 112
iron deposition in
in siderosis, 170
with excess dietary methionine, 202, 317
lymphocyte sequestration by, mechanism of, 80
Sprue
use of medium chain triglycerides in, 71
Squalene
effect on retinol induced lysis of erythrocytes, 55
Starch (*see* **Carbohydrate**)
Starvation
blood insulin and growth hormone levels in, 102
effect on acyl-CoA compounds in liver, 246
effect on fatty acid composition of organs, 151
protein, effect on erythropoiesis, 242
Steatorrhea
in tropical sprue, use of medium chain triglycerides in, 71
Stomach
protein leakage in, in celiac disease, 74
Storage
chlorinated hydrocarbons in fatty tissues, SA225
frozen meat, vitamin losses in, 18
iron, in man, SA129
Stress
cold, effect on plasma free fatty acid levels, 238
effect on offspring of dietary restricted mothers, 84
Sucrose (*see* **Carbohydrate**)
Surgery
ileal bypass, effect on hypercholesteremia, 178
Synthesis
antibodies
feedback control of, 19
in pyridoxine deficiency, 250
role of thymus in, 146
cholesterol, inhibition by bile salts, 187
enzymes, role of insulin in, 153
fat
in heart muscle, 14
in liver, effect of ethanol intoxication on, 338
fatty acids
effect of fasting on, 151
in liver, role of microsomes in, 92
possible regulation by acyl-CoA compounds, 246
phospholipid
effect of ethanol intoxication on, 338
rate of, N351
polyunsaturated fatty acids, in liver microsomes, 122
protein
after force feeding of amino acid deficient diets, 27
effect of threonine deprivation on, 111
effect of vitamins A and E on, 82
inhibition
by ethionine, 125
relation to lipid transport, 181
ribonucleic acid, in pyridoxine deficiency, 250
taurine, 284
thiamine, in the intestine, effect of dietary fat on, 334

Tadpole
metamorphosis, effect of vitamin A on, 106
Taurine
excretion
in homocystinuria, 8
in muscle necrosis, 284
Teeth
caries
action of phosphates on, 307
cariogenic properties of wheat flour, 275
effect of saliva stimulation on, 168
in offspring of tetracycline treated mothers, 281
methods for scoring, 275
relation to dietary sodium, 117
Temperature
measurements, in sheep, 104
relation to protein requirement for salmon, 21
Tetracycline (*see* **Antibiotics**)
Thiamine
deficiency, methods for estimating, 234
excretion, in young men, 234
losses, during frozen meat storage, 18
synthesis, in the intestine, effect of dietary fat on, 334
Thymus
involution, from excess dietary homocystine, 317
role in immunological competence, 146
Thyroid (*see also* **Hormones**)
changes, from excess iodine, 210
regulation of serine dehydratase by, 279
Thyroxine (*see* **Hormones**)
Tissue
copper proteins in, in Wilson's disease, N63
flavin level, effect of thalidomide on, 221
iron distribution in, in idiopathic hemochromatosis and siderosis, 170
oxygen, relation to erythropoietin production, 16
stainable iron in, significance of, 262
Tissue Culture
of phytohemagglutinin treated lymphocytes, 53
Tocopherol (*see also* **Vitamin E**)

alpha, effect on retinol induced lysis of erythrocytes, 55
Toxemia
pregnancy, experimental studies, 309
Toxicity
aflatoxin, in monkeys, 331
dietary iodine, 210
foods, effect of MAO inhibitors on, 326
goldthioglucose, relation to blood glucose levels, 252
iron, treatment with desferrioxamine, 72
lysine, for chicks on casein-gelatin diet, 139
methionine, 202
dietary, effect of serine on, 317
pesticides, in foods, SA225
riboflavin, 40
thalidomide, 221
vitamin A, 106
in hens, N63
in infants, 263
Trace Elements
copper
deficiency in infants, 164
dietary, in Wilson's disease, 301
in tissue proteins, in Wilson's disease, N63
fluoride
effect of feeding on otosclerosis, N128
effect on size of bone crystals, 237
iodine, effect of excess on thyroid gland, 210
manganese, balance in children, 236
Transesterification
by aryl-esterases, in human blood, 166
role in metabolism of cholesterol esters, 108
Transport
geometric isomers of linoleic and oleic acids, 12
Trigonelline
conversion to niacin during cooking, N286
Trimetaphosphate
cariogenic action of, 307
Trypsin Inhibitor
effect on cystine utilization, 346
Tuberculosis
isoniazid therapy, riboflavin as a marker in, 40
Tyramine
toxicity, in presence of MAO inhibitors, 326

Ubiquinone
effect on retinol induced lysis of erythrocytes, 55
treatment of vitamin E deficiency, 90
Urate
blood levels, in obese subjects during fasting, 102
excretion, in hyperketonemia, 171
Utilization
cystine, effect of feeding trypsin inhibitor on, 346
free fatty acids, effect of cold stress on, 238
methane, in ruminants, 157, N286
sugars, by premature infants, 10

Varietal Differences
in vitamin B_6 in corn, 78
Vascularization
role of vitamin A derivatives in, 248
Vegetable
protein
fortification with peanut-soybean, 75
use in protein-rich foods, 272
Vision
role of retinol in, 89
Vitamin A (*see also* **Carotene, Retinol, Retinal, Retinoic Acid**)
absorption, in infants and children, 297
anhydrovitamin A, metabolism of, 341
deficiency
central nervous system changes in, 313
in Lebanese children, SA97
in the house fly, 89
derivatives, biological activities of, in the chick, 248
dietary excess, effect on egg production, N63
effect on erythrocyte swelling, 55
effect on liver and serum vitamin E, 82
effect on tadpole metamorphosis, 106
epoxy derivatives, biological activity of, 332
intake
in the U.S.A., SA1
of American Negroes, SA161
metabolism, review, 218
retinol, esterification in microsomes, 218
toxicity, in infants, 263
Vitamin B_6
deficiency
ribonucleic acid synthesis in, 250
taurine metabolism in, 284
role in brain metabolism, SA289
Vitamin B_{12}
absorption, SA33
Vitamin E
deficiency
effect on placental transport, 309
in Lebanese children, SA97
in the chick, metabolic changes in, 90
Vitamin K
derivatives, effect on retinol induced lysis of erythrocytes, 55

Water
conservation, in fasting, effect of dietary sodium on, 45
intake, of man on space flights, 68
Weaning
time, relation to learning ability, 211
Weight
body
changes, significance of, 199
excess in U.S.A., SA1
kidney, changes, from excess dietary methionine, 317
reduction
from excess dietary methionine, 202
urate excretion in, 171
increases on school lunch program, 35
Weightlessness
effect on physiological functions, 68
Western Hemisphere Nutrition Congress, N191
Wheat
flour, cariogenic properties of, 275
vitamin B_6 in, 78
Wilson's Disease (*see* **Disease**)

Xanthurenic Acid
excretion, in riboflavin deficient baboons, 87
X-Ray Diffraction
studies of bone crystal size, 237